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The Ideal of Open-Mindedness and Its Place in Education

William Hare
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> The fading of ideals is sad evidence of the defeat of human endeavour.
> —A. N. Whitehead, *The Aims of Education*

It is tempting to smile at those self-satisfied theologians who saw no need to peer into Galileo's telescope since the nature of the heavenly bodies was already known to them. Scripture plainly recorded (Joshua 10:13) that the sun on one occasion stood still in the middle of the sky, and consequently heliocentrism could not be true.[1] If absolute certainty is already at hand, what need is there to inquire and investigate? The history of science is littered with similar certainties that turned out to be illusory — the impossibility of airships, X-rays, and continental drift, for example — but hindsight is not available when we need it most. The difficult task is to recognize that a new idea deserves consideration, and to be willing to entertain it seriously, at the moment when we ourselves are strongly inclined to favor a view with which it conflicts.

If we are honest with ourselves, our own reactions when faced with rethinking a belief we have long accepted are often not dissimilar to those of Galileo's contemporaries. When we are inclined to be contemptuous of those who would not see what was before their eyes, it is worth returning to our own day and our own inclinations. Congressman John Lewis from Georgia remarks, with respect to the reaction in 2001 to the exhibit showing James Allen's collection of photographs of lynchings in the United States: "Many people today, despite the evidence, will not believe — don't want to believe — that such atrocities happened in America not so very

long ago."[2] The examples will vary, but a similar point could no doubt be made in every society. The evidence is there, if we will only consider it, but open-mindedness is defeated by deep-seated assumptions that make it too painful to recognize the truth.

Open-mindedness is an intellectual virtue properly ascribed when an individual or a community is disposed to take into account all that is relevant to forming a sound judgment and likewise disposed to reconsider judgments already made, or in formation, in the light of emerging difficulties, especially when it is tempting to avoid acting in these ways. In any absolute sense it is unattainable, and even relative success can be elusive. Those who try to be open-minded must steer clear of bias, prejudice, doctrinaire beliefs, hasty conclusions, fear of the truth, and pressure to conform, all of which undermine attempts to examine evidence seriously. To echo Descartes' observation with respect to good sense, everyone fondly imagines that open-mindedness is part of his or her own outlook however rare it may be in other people, but this very tendency is itself yet another obstacle to becoming open-minded. Not being ready to recognize the possibility of such a fault in ourselves, we are not sufficiently alive to the forces that bring about closed-mindedness.[3]

The challenge to entertain new possibilities is accompanied by the danger of being taken in by attractive but foolish nonsense. We must be receptive and welcoming to theories and discoveries that conflict with existing beliefs; but the history of science also tells us that this disposition can lead to credulity. Reflection on the Galileo story, reminding us of stubborn resistance, may even encourage untoward hospitality. Scientists in the early 20th century were too ready to welcome Piltdown Man, and more recently some have been ready to embrace cold fusion, psychokinesis, facilitated communication, and other embarrassments. A willingness to believe in these ideas only reveals how easily scientists can, in Martin Gardner's inimitable words, be hornswoggled (Gardner, 1981, p. 294). Before we point to the credulity of others, however, hands up all those who are quite sure they would not have been among that panic-stricken radio audience in 1938.

Open-mindedness surely deserves a central place in any philosophical account of education that is to prove satisfying. If we take seriously the notion of genuine inquiry, together with such related ideas as considering all sides to a question, paying attention to counter-evidence, viewing one's conclusions as provisional, learning from one's mistakes, and trying to rid oneself of bias, then the attitude of open-mindedness immediately presents itself as having fundamental significance. To be open-minded is, after all, to be critically receptive to alternative possibili-

ties, to be willing to think again despite having formulated a view, and to be concerned to defuse any factors that constrain one's thinking in predetermined ways. Without such dispositions which make for open-mindedness, inquiry degenerates into nothing more than the attempt to find whatever reasons will support the particular conclusions one desires and which have been accepted in advance. As C. S. Peirce remarks, the conclusion determines what the reasoning will be — a process he rightly labels "sham reasoning" (*Collected Papers*, 1.57).[4]

Genuine inquiry, by contrast, involves struggling against preconceived ideas, hasty conclusions, and other factors that distort and undermine our efforts, in a determined effort to arrive at whatever beliefs, interpretations, explanations, theories, policies, or value judgments seem warranted as a result of attending to the widest range of considerations that can be adduced, always mindful that further experience, reflection, imagination, and the exchange of ideas may lead to these tentative views being overturned or modified. Such inquiry is, by its very nature, open-minded; and open-minded inquiry, both as a way of learning and the desired outcome itself, is an indispensable feature of education if education is to mean more than simply reinforcing prejudices or receiving beliefs uncritically. A view of education emerges in which inquiry and reflection constitute ongoing and fallible processes framed by such regulative ideals as understanding, judgment, appreciation, sound interpretation, and knowledge. These ideals are always beyond our reach, of course, but they operate as goals we may hope to approach wherever the passion to learn, as Peirce puts it, is not contaminated by having an axe to grind (1.44).

Such a conception of education is intimately connected with open-mindedness, as philosophers have recognized since Socrates declared his determination to follow the argument where it leads. Philosophers of very different philosophical persuasions share the view that open-mindedness is vital. In the early twentieth century, for example, Bertrand Russell maintained that open-mindedness is one of the qualities that education should aim at because he recognized that a genuine desire for knowledge, where knowledge is understood to be provisional and revisable, presupposes open-mindedness (Russell, 1973, p. 43).[5] Similarly, John Dewey singled out open-mindedness as one of a small number of attitudes that are really central in education because intellectual growth and ongoing development require a disposition to welcome new ideas, modify our purposes, and allow experience to accumulate (Dewey, 1966, pp. 175-6). And Jacques Maritain, in articulating the central aims of education, called attention to the distinction between truth as a set of ready-made formulas that close the mind, and truth as the progressive

attainment of new truths and interpretations that open and enlarge the mind (Maritain, 1943, p. 12).

An awareness in our own day that education is intimately connected with the development of open-mindedness is readily apparent in the sharp contrast drawn between education and indoctrination, in the importance placed on dialogue and the community of inquiry, in the objections raised to the mere transmission of knowledge, and in many of the ideas that inform critical thinking, media literacy, and the discussion of controversial issues. A commitment to open-mindedness in education is especially evident in the writings of contemporary philosophers such as Maxine Greene, with her determination to break through "the limits of the conventional and the taken-for-granted" (Greene, 1994, p. 1); in Paulo Freire, with his emphasis on consciousness-raising, unveiling reality, and the quest for emancipation (Freire, 1970); and in Israel Scheffler, with his conception of the teacher as someone who submits his or her ideas to the critical scrutiny of the students and who is open to the possibility of learning from their reaction (Scheffler, 1989, p. 3).

We may add to these encouraging signs acknowledgment that mission statements of schools and school boards often include reference to open-mindedness as an ideal of education. Before we become complacent, however, it is important to remember that open-mindedness, in the context of schooling, is threatened by a number of factors. One only has to look at the American Library Association's list of "most challenged" books in recent years to see that many groups are anxious that students not consider certain ideas, and these challenges can dampen any enthusiasm teachers may have for opening up the curriculum.[6]

Encouraging discussion of controversial and open-ended questions in the classroom demands of teachers a readiness to live with the criticism that will almost certainly be directed at them, not knowing how much support they will receive from their school or school board. In addition, pressure on teachers to "cover the material" in the curriculum and to prepare students for standardized tests leads to the postponement of opportunities to reflect on ideas in a manner that might foster ways of holding beliefs that are conducive to open-mindedness.

These realities can easily foster a cynicism about open-mindedness that contributes to the fading of ideals that Whitehead feared. Unfortunately, this tendency is exacerbated by the fact that various philosophical doubts about the possibility and desirability of open-mindedness surface frequently, as the following examples indicate:

(i) It is claimed, for example, that open-mindedness conflicts with having firm moral principles, and that it implies a kind of relativistic attitude towards values. This confusion is bound to arise if we fail to

distinguish between (a) having definite beliefs and (b) holding them in a certain way (Russell, 1948). A willingness to reconsider one's principles should genuine difficulties arise — as has happened frequently in the past, such as with respect to the treatment of animals in medical experimentation or with what counts as acceptable forms of punishment for criminals — does not diminish the seriousness with which our present principles are now regarded, nor does it mean that contrary principles are regarded as equally acceptable.

(ii) It is quite commonly thought that open-mindedness involves a willingness to embrace absurd and even outrageous views, granting them a status that commonsense would deny. This particular confusion arises when we neglect to bear in mind that open-mindedness, as Dewey famously put it, is not empty-mindedness (Dewey, 1966, p. 175). It is a form of critical receptiveness (Russell, 1985, p. 117), not mere receptiveness to any idea regardless of its merits. Cranks, who find their views rejected, are quick to claim that their critics are not open-minded, but open-mindedness requires that we examine the evidence seriously, not that we accept it.

(iii) It is increasingly common to hear open-mindedness dismissed as simply impossible, one of those Enlightenment myths that postmodernism has scuttled. Since we always come to a situation with a set of preconceptions, our perceptions are filtered through our existing framework of ideas. Such fundamental and invisible assumptions in our conceptual framework, it is argued, make it "extremely difficult if not impossible" to take certain views seriously (Warren, 1994, p. 165). The confusion here stems from sliding from what is admittedly difficult to what is said to be impossible. That distinction, however, is of the utmost importance, and while the difficulty cannot be denied, the allegation of impossibility must be resisted.

There is nothing controversial about the claim that open-minded reflection on fundamental and invisible assumptions that are embedded in our framework of ideas is immensely difficult. It cannot be impossible, however, because fundamental and once invisible assumptions have been exposed and repudiated in the past, and what is actual must be possible. Every scientist, artist, and thinker who has challenged or overturned a tradition and brought us to see the world in a new way stands as a counter-example to the claim of impossibility. If it really were quite impossible, there would be no point trying to keep the ideal of open-mindedness alive except for revisions within our own ideological, conceptual and scientific framework. Open-mindedness, however, involves recognizing that the very framework of ideas we acquire through education and socialization, not just particular beliefs within that framework,

may in time generate a new set of ideas that undermines that very framework itself (Hare, 1979, p. 53).

There is no reason to believe that we are utterly helpless prisoners of the traditions and framework we have come to accept, and this rules out the pessimistic conclusion that open-mindedness simply cannot occur (Allport, 1954, p. 20). Gadamer observes that every tradition is "prejudiced" in the sense that it predetermines interpretation to some extent (Gadamer, 1989), but this should not be taken to mean that we cannot come to question the interpretation that we place on experience. The ideal of open-mindedness rejects prejudice, not in the sense of subscribing to the myth of a prejudice-free position, but in aspiring to a position that is less prejudiced than before by exposing prejudice wherever it can be found. It is especially important that teachers reject the pessimistic view and maintain their commitment to the ideal. If cynicism about open-mindedness can be resisted, it may be possible to look for ways in which the difficulties that block our efforts to be more open-minded may be overcome.

With that goal in mind, the contributions that make up this special issue are timely indeed. The overall impact of this work will be to enrich our understanding of the ideal of open-mindedness and to renew our sense of its significance in education. Candace Jesse Stout shows us how encountering works of art can foster that curiosity and receptivity that breaks down the narrow confines within which imagination may be trapped. Terence H. McLaughlin makes the case that even though open-mindedness may encounter certain limits with respect to basic moral principles, one should be hesitant about accepting claims about such limits too quickly and, even here, open-mindedness may have application. Michael Shermer argues that open-mindedness helps to distinguish genuine science from pseudoscience, and puts forward a "Baloney Detection Kit" to assist us in finding that delicate balance between openness and skepticism. Paul F. Bitting advances the idea that cross-cultural understanding, grasping the perspective of another person, results from the kind of open-mindedness that involves seeing another person's world "as it is", and this is a form of aesthetic awareness. Michelle Forrest emphasizes the importance in education of opening students' minds to the bias that is embedded in the way in which content is presented and reminds us that the danger of bias is never far from our own work.

Douglas Stewart's review of a recent book dealing with 50 modern thinkers on education complements these essays very well, reminding us of the ideas of influential philosophers of education and educational theorists whose work has opened our minds to new ways of thinking

about teaching and education. Many of these thinkers, including Michael Oakeshott, Maxine Greene, Elliott Eisner, Jane Roland Martin, Paulo Freire, Israel Scheffler, Nel Noddings, and others, have also been instrumental in helping the ideal of open-mindedness in education to flourish.

It is entirely fitting that this special issue of work in philosophy of education should give particular recognition to John Dewey, and it is a great pleasure to include a new portrait of Dewey by Antony Hare. It was Dewey, after all, who reminded us of the importance of attitudes in general in education, and who issued the stark warning that closed-mindedness means premature intellectual old age. The quotation from Dewey beneath his portrait on page 11 of this issue comes from "Education and the Social Order," *The Later Works*, volume 9, pp. 180-181. My thanks to all of the contributors, to the general editor, Douglas J. Simpson for his invitation, helpful advice, and encouragement, and to Margaret Graham of Texas Tech University for recreating the diagrams in the essay by Michael Shermer. To assist readers who wish to pursue the issues raised in this special issue further, I have compiled and included in this issue a bibliography of recent work on open-mindedness and education.

Notes

[1] The Copernican claim, defended by Galileo, contradicted the literal reading of Scripture and it was for this reason that the theologians condemned Galileo and rejected the new scientific view. For an excellent discussion, see Ernan McMullin, "Galileo on science and Scripture," in Peter Machamber (ed.), *The Cambridge Companion to Galileo*. Cambridge, MA: Cambridge University Press, 1998: 271-347.

[2] Quoted in David Levering Lewis (2002). Lewis reviews here two recent books dealing with lynching.

[3] Joseph Beatty asserts that open-mindedness is too cool and cognitive a virtue to include what he calls an existential-moral dimension which would enable us to see our own character as revisable. No reason is offered for this arbitrary limitation with respect to the object of one's open-mindedness, and it seems perfectly possible, albeit challenging, to be open-minded about one's own character. See Beatty (1999).

[4] References to Peirce are to volume and paragraph in the *Collected Papers of Charles Sanders Peirce* (Hartshorne, Weiss, and Burks, eds. 1931-58). Once again, I am indebted to Susan Haack both for her account of Peirce on the intellectual virtues and for her own insightful comments on the nature of inquiry (Haack, 1998).

[5] When Russell speaks of a concern for knowledge, it is worth recalling that he reminds us that "truth is for the gods; from our point of view, it is an ideal,

towards which we can approximate, but which we cannot hope to reach" (Russell, 1985, p. 149). He also points out that "there is a tendency to use 'truth' with a big T in the grand sense, as something noble and splendid and worthy of adoration. This gets people into a frame of mind in which they become unable to think" (Russell, 1927, p. 254).

[6] In this context, however, it is good to be able to report that in December 2002, the Supreme Court of Canada ruled that the Surrey School Board cannot ban books dealing with same-sex parents in elementary schools.

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Portrait of John Dewey

Antony Hare

The open mind is a nuisance if it is merely passively open to allow anything to find its way into a vacuous mind behind the opening.
—John Dewey

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Michelle Forrest is an assistant professor of education at Mount Saint Vincent University, and is the author of "Open-Mindedness and Media Bias: Education for Insight." She began her career as a classical singer, and teaches courses in philosophy of education, literacy, the arts, and popular culture. An on-going interest is in the 'open' art-work and its implications for performing curriculum. She is part of the scholar-artist collective, (1 + 1 + 1), which investigates collaborative process and the inventive and democratizing role of chance operations.

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The Art of Opening Dialogues

Candace Jesse Stout
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Introduction

It was the first week of summer session at the university. I was a sophomore taking Introduction to English Romantic Poetry and Prose. The Florida sun filtered hot through the classroom windows; in what little breeze there was, the shades flapped. That was the day Professor Yost was going to discuss Samuel Taylor Coleridge's *The Rime of the Ancient Mariner*. I was tired from the heat and like my classmates fighting off sleep. The only thing that I figured I could relate to in that long running poem was the doldrums. It took only minutes, however, to realize how wrong I was. That afternoon in that summer class in eighteenth century literature my mind was opened to poetry. In introducing Coleridge's allegory, Professor Yost made enchantment real. It was his conversational style and probing inquiry, his willingness to enter sympathetically into the thoughts and feelings of the poet, and his subtle insistence that we do the same. It was his passion for language, his empathic joining with Coleridge to bring the stifling tropical calm, the fits of lightning and thunder, and the sights of a "thousand slimy things" into our twentieth century space. It was the way he told stories of his own, his experiences of sailing in the Indian Ocean, the sea snakes and the soaring petrels he had encountered there. It was the way he invited us to remember our own narratives and trust the connections and understandings that might be brought to bear. The magic of Coleridge's words, the meter, the rhythmical harmony, the human charity, pity and re-

morse his story conveyed came clear to us that day. The poet, the poem and the professor had made the fantastic ramblings of a salty old madman plausible. For many of us in that class, it was an awakening. We had begun to see the possibilities in poetry — for meaning and relevance and for experiences we could never have foreseen. It was the instance when we understood the truth in Mary Warnock's words, that "there is always *more* to experience and *more in* what we experience than we can predict" (1978, p. 202).

Recollections of Professor Yost and my awakening to romantic literature emerged this summer as I completed a study of the experiences of thirty veteran art teachers working in elementary through secondary classrooms from Montana to Maine. Over several months they responded to a body of open-ended questions, producing an aggregate of 600 pages of perspectives on instructional philosophy, trends, issues, and reforms in arts education over the past quarter of a century. Among them was a heterogeneity of perspectives and experiences, varying according to the contexts within which they teach and colored by lenses of varying worldviews. Most revealing, however, there emerged a nuclear consistency, a common ethos that compelled this generation to become art teachers. Woven persistently throughout the whole of their narratives was a belief in the capacity of arts education to become a seedbed for growing imagination, nurturing the spirit of inquiry, and opening a dialogue about life (Stout, 2002). It is this vehement assertion, that education in the arts cultivates receptivity, what Carl Sagan describes as "a great openness to new ideas" (1987, p. 41) that I want to talk about here. In doing so, I draw upon the experiences of the teachers in my study as well as my own.

Resuscitating Imagination

When asked to articulate his primary goal in teaching art, one high school teacher said,

> The sad thing is that somewhere along the way my students have lost their confidence in imagination. Imagination is the key to learning about art, to creating it and understanding it. My job, as I see it, is to resuscitate the imagination.

In teaching undergraduate college students in art appreciation and criticism, I have encountered the same. Somewhere between the beginning of their school days and their early years in college so many of our students have suppressed imagination, relegating it to life outside of the classroom. In these later years of their schooling, students seem to need

permission to question, hypothesize, and suppose. Somehow the speculative process has been discouraged, the childhood craving to wonder and question has been subdued. Like the high school teacher in my study, I am compelled to remind students of the role of imagination in learning of all kinds. For some, the door to imagining opens easily; others have to be enticed with a variety of instructional hooks. Through necessity, those of us in the arts have become adept at finding such hooks. For example, in the first week of my art appreciation and criticism course, we explore the eccentric and inexplicable work of Belgian Surrealist painter René Magritte, not as an aesthetic paragon, but as master of surprise. Magritte talked openly about his battle with ennui. For him, boredom was the bane of existence. He described himself not as a painter, but as a man who thinks and questions. Full of the unexpected and the incongruent, his images provide no answers; instead, they interrogate. "His life had been a solitary posture of immense effort: to overthrow our sense of the familiar, to sabotage our habits, to put the real world on trial" (Gablik, 1985, p. 9). In one student's words, "Magritte is outrageous! He has the nerve to throw away the rules and paint his imagination." He has become a favorite among my students. They move willingly into his images. They puzzle *about* him and *along with* him and they love the rebel within him. He gives them permission at the start to pursue his own favorite question: What if things were otherwise? In introducing his floating castles, anonymous men in bowler hats, and roses as big as a room, I broach the generative capacity of imagination. At every turn, Magritte's work provides visual intrigue, giving the viewer consent to meander and speculate.

According to Nelson Goodman, we engage with the arts not to replicate the experience of our own reality but to partake in a dynamic imaginative process, to think and see and feel those things we never thought possible before (1976). Eisner corroborates,

> As imagination is given permission to rise, [students] have the opportunity to enter worlds not tied to the literal, to the concrete, to the practical. Discovery emerges in the appreciation of qualities examined and images pursued. The arts, more than most fields, put a premium on such activities, and those activities can help students discover special qualities of experience we call aesthetics. (1998, p. 85)

Engaging with the arts involves "making delicate discriminations and discerning subtle relationships, identifying symbol systems and characters within these systems and what these characters denote and exemplify, interpreting works and reorganizing the world in terms of works and works in terms of the world" (Goodman, 1976, p. 241). In Maxine Greene's words,

> The extent to which we grasp another's world depends on our existing ability to make poetic use of our imagination, to bring into being the "as if" worlds created by writers, painters, sculptors, filmmakers, choreographers, and composers, and to be in some manner a participant in artists' worlds reaching far back and ahead in time. (1995, p. 4)

In resuscitating the imagination of our students, we cultivate the propensity for "seeing- as" versus "seeing-that" (Wittgenstein, 1963, p. 197). In *Philosophical Investigations*, Wittgenstein asks, "Doesn't it take imagination to hear [or understand] something as a variation on a particular theme?" (1963, p. 213) The hope is to move students from perception of the literal to visions of the metaphorical, from seeing the obvious and conventional to envisioning alternatives that can extend and enrich how and what they perceive and come to know (Barrow, 1988; Walters, 1994). In *Releasing the Imagination*, Greene encapsulates,

> It may well be the imaginative capacity that allows us also to experience empathy with different points of view, even with interests apparently at odds with ours. Imagination may be a new way of decentering ourselves, of breaking out of the confinements of privatism and self-regard into a space where we can come face to face with others and call out, "Here we are." (1995, p. 31)

Opening Dialogues Old and New

Of all the disciplines in the curriculum, the arts have the capacity to evoke empathic awareness and in that sympathetic exchange awaken a dialogue. In the description of Ira Shor and Paulo Freire, "Dialogue is the moment where humans meet to reflect on their reality as they make it and remake it. It is the quintessential human act, the social moment wherein we establish ties, and where we have authentic recognition of the other" (1987, pp. 98-99). Inside each painting, poem, and piano sonata, there is what Rader calls a "living presence" (1973, p.12) that calls to the beholder: Welcome to my world! When we actively attend to artworks, we reach out to this "living presence," and they to us, and we enter a dialogue about life.

In some instances these dialogues are altogether new. In others, they are familiar. According to Arnheim, art finds "new form for old content . . . a fresh conception of an old subject" (1974, p. 142). In our dialogues with these forms we are asked to return to our assumptions and consider them again. In entering a dialogue about things that are familiar, about the accepted, we frequently find out that what we take for granted is not granted for all. A scenario from one of my own classes

explains. We were talking about historical narrative in art and preparing to explore Emanuel Leutze's painting, *Washington Crossing the Delaware* (1855). Before showing the slide, I asked the students to do a five-minute writing on their knowledge of the event. As they shared their notes, the basics emerged — the who, what, when, where, and why. Following that, I projected the image on the screen so that it measured nearly the same as the massive (378.5 x 647.7 cm) canvas itself. We spent a lot of time observing. We talked about the visual qualities: the impact of the grand scale; the shape and placement of the jagged ice floes; the positioning of the men's bodies; the theatrical play of light and shadow; the forces and counter forces set up by the water's chop and the varying directions of the oars, and more. We noted the mixed expressions of fatigue and determination on the soldiers' faces and in the center of it all, the anticipative, confident stance of the General. Conversation was multi-layered and rich, moving far beyond the visual and extending throughout the whole class session. As time came to an end, one student from the back of the auditorium commented: "Why didn't someone just *show* us this painting? It might have helped."

The aftermath was both laughter and approval. It was one of those student remarks that at first seemed dismissive, but upon reflection, that statement encapsulated what they had learned about the nature of art as well as their own capacity to participate with it. By that point in these college students' education, Washington's crossing of the Delaware was old stock. Textbooks and lectures about the winter of 1776 had followed them since grade school, and in choosing Leutze's painting I was aware of this. I had selected this historical portrait not because it is among the artworld's "masterpieces," but because it provides "new form for old content." In introducing students to Leutze's image of this event, my hope was to invite them into a new conversation of an old topic, to consider in visual form what words cannot tell. The "givens" were re-opened. Students talked about the match and mismatch between long-held conceptions of this historical feat and the artist's vision of it. [They even wondered whether it was *his* vision or that of his patrons.] They questioned and pondered the "facts" as they had understood them, and re-examined their own assumptions and interpretations when their ideas conflicted with others. In moving beyond the surface into the richness of the details, students found themselves inside the panoramic scene thinking empathically along with Leutze about this desperate moment in the revolution. Whether or not they bought into Leutze's patriotic sentiments and his dramatization of American history was not the point. From this image came a perspective that was missing from the texts, one that was more human, more open to interpretive participation

with history. In my student's words, in "just show[ing]" them this visual interpretation, we had re-opened a dialogue, one that most had assumed was closed. In reflecting on this experience, I agree with Greene when she says, "Informed encounters with works of art often lead to a startling defamiliarization of the ordinary" (1995, p. 4).

Embedded within each artwork are the experiences of the artist, the whole complexity of that living presence, from their individual qualities to the culture within which they live and create. Sometimes those experiences connect with our own and in those times, we are reinforced, comforted, or moved along on a familiar path in a familiar way. As one freshman responded when I asked why he read novels, short stories, and poems: "So I don't feel so alone in the world." But when we have the opportunity to engage with a diversity of works, we may find those that will move us in an entirely new direction. As vivid example, in one class, we were studying the paintings of Mexican artist Frida Kahlo. Her work resides in the Latin American and Mexican cultural stream of "magical realism," fusing myth, dreams, fact — an alliance of reason and fantasy (Kahlo, 1995). In the artist's own explanation, her themes were her own sensations, states of mind, her own reactions to life (Kahlo, 1995). In their first encounter with Kahlo's paintings, images were projected on the classroom screen confronting them with miscarriages, open wounds, blood clots, and black tears. Most were visibly uncomfortable and as I learned later, shocked by the frankness of the images. It was my habit to flick through an array of images before we began our discussion, giving them time to observe and think. After a long silence, one young man asked, more in seeming defiance than real inquiry: "What can *I* get from this? What can art like *hers* do for me?" This Mexican woman was inviting them into a dialogue all new. Within her work they encountered a strange intimacy—about the ambiguity of her ethnic identity; her suffering, physical and emotional; her marriage — the infidelity of Diego Rivera. Through her lush colors and dream-like images, students were propelled into Mexican culture — history, religion, politics — and into interests and perspectives that were foreign, even at odds with their sympathies and understandings. And inextricably intertwined with all of this newness they discovered something universal wrapped in a beauty strange to their expectations. They found, in the words of Carlos Fuentes, that "Kahlo's self-portraits are beautiful for the same reason as Rembrandt's: They show us the successive identities of a human being who is not yet, but who is becoming... never a fulfillment, always an approach . . ." (Kahlo, 1995, p. 16). In their imaginative journeys into the life and dreams of Kahlo's canvases, they encountered strangeness. At the same time they found themselves realizing that there was more for

each of them in the experience of Frida Kahlo's work than they had been able to predict. In speaking of her encounters with "landscapes" different from her own, Greene describes, similarly, the intermeshing of others' images into her own.

> I am not suggesting that I could claim a kindred suffering, but at the same time, because of *Invisible Man* and *Native Son* and *The Bluest Eye* and *The Color Purple* and *The Women of Brewster Place* and *My Eyes are Watching God* and *Beloved*, new meanings have fed into my own past shudderings and fears ... and they are grounded in my lived world, my first landscapes, my "rememory." (1995, p. 82)

In her discussions of *mindfulness*, Ellen Langer asserts that students should be taught to think dialogically and conditionally. When trying out different perspectives becomes a habit, and when students understand that knowledge is provisional, contingent upon context, thinking becomes more flexible and sympathies become more open (1989).

Conclusion

In *The Moviegoer,* Walker Percy talks about the possibility of a quest: "To become aware of the possibility of a search is to be onto something. Not to be onto something is to be in despair" (1979, p. 13). It was Professor Yost and his passion for Coleridge, and all the rest of romantic literature, who turned me on to the search so many years ago. It was his conversational style, his love for the questions, and his empathic disposition that modeled for me the vital role that teachers in the arts can play in cultivating "a great openness to new ideas." In a classroom where communal deliberation is the method and critical receptiveness and mutual understanding are the goals, the arts have the capacity to draw together the thoughts and feelings of a classroom of students and turn them toward the imaginative exploration of a wide world of human experience. Through their encounters with paintings, poems, and piano sonatas, students can enter a world of on-going dialogue that can move them from narrow interests and absorption in self to an unfolding curiosity and a growing concern for the world in which they live.

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Open-Mindedness as an Aim in Moral Education

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The development of open-mindedness in students is widely accepted as an important educational aim, and William Hare has done more than any other educationalist to bring the aim, and its implications and complexities, into more precise focus (see especially Hare, 1979). Open-mindedness has an intuitive attractiveness and plausibility as a general educational aim. On what grounds could educators be justified in promoting closed-mindedness in their students? In the area of moral education, however, closed-mindedness has indeed been argued as a state of mind which educators should aim at. Scruton *et al.*, for example, despite their commitment in general to open-mindedness as an educational aim[1] argue that ". . . a large part of morality is characterised by foregone conclusions, and by a concerted attempt to induce a closed mind" (Scruton *et al.*, 1985, p. 45). They continue "A teacher who sought to induce moral principles in his pupils by asking them to explore the various 'alternatives' would be engaged in a self-defeating task. We do not discover the moral reality of murder by giving it a try, nor do we come to a better understanding of the evil of rape or torture by experimenting with a variety of points of view upon them, or by trial and error" (*ibid*). Scruton *et al.* therefore conclude that the minds of students ought to be closed on 'fundamental issues of morality' (Scruton *et al.*, 1985, p. 25). This brief essay engages in a preliminary exploration of the nature and scope of open-mindedness as an aim in moral education. The essay has two sections. In the first section a number of considerations which may restrict and constrain open-mindedness as an aim in moral education are

examined, and in the second, an outline is developed of the proper nature and scope of open-mindedness as an aim in this context.

The discussion employs Hare's account of an open-minded person as one who is able and willing to hold his or her beliefs in such a way that the beliefs are open to revision in the light of evidence and argument (Hare, 1979, ch. 1). Hare writes, "A person who is open-minded is disposed to revise or reject the position he holds if sound objections are brought against it, or, in the situation in which the person presently has no opinion on some issue, he is disposed to make up his mind in the light of available evidence and argument as objectively and as impartially as possible" (Hare, 1979, p. 9). For reasons of space, complexities in the characterisation and defence of this general view cannot be pursued in detail here, although some complexities pertinent to the present discussion will emerge in due course.[2]

Open-Mindedness as an aim in Moral Education: Restrictions and Constraints

Given the strong arguments against restricting the development of open-mindedness in students in any sphere (see, for example, Hare, 1979, ch. 7) on what grounds can a restriction of open-mindedness in the moral domain be deemed to be appropriate and justified?

A central question which arises at the outset is *in relation to which aspects* of the moral domain is it being suggested that students be open-minded? The moral domain is, after all, a varied one: it consists *inter alia* of first order moral sensitivities, beliefs, judgements and commitments (which can vary with respect to their basicality or fundamentality), second order theorising about the nature of morality (including meta-ethical reflection) and so forth.

It is in relation to basic or fundamental moral sensitivities, judgements, beliefs and commitments that it may seem appropriate to seek, or at least to be content with, 'closed-mindedness' on the part of students. Bernard Williams observes that "...while it is certainly a good thing that people should be to some degree open to doubt about their ethical convictions, general doubt can hardly be desirable" (Williams, 1995, p. 203). Williams is perhaps thinking here of such basic and fundamental moral sensitivities, beliefs, judgements and commitments as those involved in the rejection as wrong of causing suffering to innocent people for amusement. It is in relation to such basic or fundamental matters that Charles Taylor raises the anxious question ". . . what if some people came along who just failed to share our most basic and crucial moral intuitions? . . ." (Taylor, 1993, pp. 208-9). On such matters, we would regard open-mindedness in the sense of a disposi-

tion on the part of a person to reconsider or revise one or more of their sensitivities, beliefs, judgements, or commitments as deeply worrying. What would we think of a student who was open to the thought that torturing other members of the class for fun might, after all, be morally acceptable? This worry persists even if it is accepted that having a firm beliefs (in this case about basic or fundamental moral matters) is compatible with open-mindedness with respect to those beliefs (Hare & McLaughlin, 1994, 1998). In relation to the matters under consideration, openness to reconsideration and revision itself seems problematic.

In relation to such basic and fundamental moral matters it can be argued that the limits of open-mindedness have been reached. Hare has always acknowledged that one cannot and should not be open-minded about every belief which one holds (Hare, 1979, pp. 17-19; 38-39) and this point has been developed in subsequent discussion (Hare & McLaughlin, 1998, pp. 284-287). The sorts of moral sensitivities, beliefs, judgements and commitments which have been mentioned are basic or fundamental to the moral domain itself and to call them into question, or to be disposed to do so, might be considered to undermine the moral domain itself and to put the questioner outside that domain. It might be argued, therefore, that in common with (say) basic and fundamental logical principles, the kinds of basic and fundamental moral matters which have been alluded to constitute the 'limits of open-mindedness.' Whilst attention is needed to the complex question of what basicality and fundamentality in the moral domain consists in, the extent to which it is analogous to basicality and fundamentality in the logical domain and the precise respects in which it constitutes a limitation on the possibility of open-mindedness, it may nevertheless be felt that, in such matters, 'the limits of open-mindedness' come into view. This line of argument seems to be salient in the minds of Scruton *et al.* They insist that "It is no part of education to induce the pupil to entertain all conclusions in a spirit of scepticism. On the contrary, about some conclusions only certainty is appropriate, and an educational process that did not produce certainty (or at any rate 'certain certainties') would be of little value in the life of a merely mortal creature" (Scruton *et al.*, 1985, pp. 15-16). Whilst they have in mind logical constraints upon open-mindedness in this context[3] they also include, as we saw earlier, specifically moral constraints. Noting the practical necessity of morality for the survival of finite creatures they conclude that, notwithstanding the need of closed-mindedness in relation to fundamental aspects of the moral domain and the inability therefore for moral education to conform to the educational principles which they advocate in general (*op cit.*, p. 45) "No parent, anxious for his child's welfare, could wish him to be deprived of morality. . ." (*ibid*).

The argument about 'limits of open-mindedness' in relation to basic or fundamental aspects of the moral domain can seem to gain strength by noting that in Hare's characterisation of open-mindedness 'evidence' and 'argument' (of a relevant kind) are central in that 'evidence' and 'argument' are what the open-minded person is open to. A critic, however, may query the salience and even applicability of 'evidence' and 'argument' in the moral domain, at least in relation to the basic and fundamental matters which are currently the focus of attention.

This point might be developed in a range of ways. Charles Taylor, for example, challenges the 'primacy of the epistemological' in morality and in practical reasoning more generally, which he characterises as "... the tendency to think out the question of what something *is* in terms of the question of how it is *known*" (Taylor, 1993, p. 208). Taylor identifies a prevailing moral scepticism in these terms, "... the widespread belief that moral positions cannot be argued, that moral differences cannot be arbitrated by reason, that when it comes to moral values, we all just ultimately have to plump for the ones which feel/seem best to us" (*op cit.*, p. 208). Yet in rejecting moral scepticism of this kind Taylor rejects a foundationalist view of moral reasoning[4] and points to an important aspect of the kind of reasoning which is appropriate in asking whether there is any way in which a person who failed to share our most crucial and basic moral intuitions could be shown to be wrong (*op cit.*, pp. 208-209). Taylor insists "If 'showing them' means presenting facts or principles which they cannot but accept, and which are sufficient to disprove their position, then we are indeed incapable of doing this" (*op cit.*, p. 209). Taylor claims, however, that this is a 'totally wrong' view of practical reason. We are not in the predicament of facing people who are 'unconfusedly,' 'lucidly,' and 'undividedly' convinced of their rejection of, say, the very principle of the inviolability of human life (*ibid*). We could indeed, admits Taylor, only hope to rationally move such a person by '. . .arguing from the ground up, digging down to the basic premises we differ on, and showing him to be wrong there.' (*op cit.*, p. 209). However, a more adequate picture of practical reasoning in this kind of situation, insists Taylor, is not that of having to disprove "... some radically opposed first premiss" (*op cit.*, p. 209) but starting off "...on the basis that my opponent already shares at least some of the fundamental dispositions towards good and right which guide me" (*op cit.*, p. 209). The role of reason lies in exposing defects of reasoning involved in (for example) 'special pleadings' where certain groups of people are seen as sub-human and therefore exempt from the recognised prohibition against killing. Taylor insists that there are "... limits to what people can unconfusedly and undividedly espouse" (*op cit.*, p. 209) and this seems to support the argument about 'the limits to open-mindedness' in relation

to basic and fundamental aspects of the moral domain.

Other grounds on which an argument about the 'limits of open-mindedness' in the moral domain could be supported could appeal to considerations relating to the primacy of the dispositions, the significance of 'internal reasons' and the limits of knowledge in moral and ethical matters (see, for example, Williams, 1981, 1985, 1995), the significance of 'caring' in this domain (see, for example, Frankfurt, 1988) and of emphases of a Wittgensteinian kind (see, for example, Bambrough, 1987; Gaita, 1999; Phillips, 1992). More specifically educational perspectives can be found in arguments relating to the limitations of a Kohlbergian approach to moral education (see, for example Locke, 1987; Reed, 1997) and of abstract reasoning in this domain more generally (Hirst, 1999), the salience of Aristotelian practical judgement (see, for example, Smith, 1997) and the limitations of 'rationalistic' as distinct from 'virtue' accounts of moral education (see, for example, Haydon, 2003; Noddings & Slote, 2003).

A number of considerations of a more directly educational kind illuminate the claim that in relation to basic and fundamental aspects of the moral domain the 'limits of open-mindedness' have been reached. Blake *et al.*, for example, observe that much of moral education takes the form of 'waiting for the moral penny to drop' "... if the child does not know then it is indeed true that we cannot *tell* her. *Instruction* is as inappropriate here as when someone trying to teach us mathematics begins by assuring us that a+b=b+a" (Blake *et al.*, 2000, p. 164). Renford Bambrough evokes the example of the moral upbringing of children to illuminate the 'absurdity' of requiring 'a single supreme principle' as the foundation and justification of morality: "A child learns when to say 'It's not fair' or 'Thank you' or 'I couldn't help it' before meeting any conceivable candidate for the role of supreme principle..." (Bambrough, 1987, p. 165). Morality, Bambrough reminds us, is a 'going concern' (*ibid*) into which the child must be inducted.

John White alludes to the complexity of justification in the moral domain and holds that a 'major task' of early moral upbringing is to form altruistic dispositions (eleven examples of which are given and presented as broadly uncontroversial) (White, 1990, pp. 46-48)[5] which should be built into children "... as firmly as possible" (*op cit.*, p. 49), including the 'bedrock significance' of prohibitions against (say) telling lies and injuring others for our personal and social lives (*op cit.*, pp. 50-51).

Open-Mindedness as an aim in Moral Education: Its Proper Nature and Scope

It is important to note that the arguments which have been discussed in the last section relate only to basic or fundamental aspects of the moral

domain. The proper scope of arguments restricting open-mindedness as an aim in moral education on grounds appealing to the 'limits of open-mindedness' become apparent in the extension by Scruton *et al.* of their argument about the necessity for closed-mindedness to the area of religion. They argue that, just as in the case of morality, religion is characterised by 'foregone conclusions' and that it is 'an ineliminable part' of our constitution as rational beings. The matters with which religion deals, Scruton *et al.* argue, ". . . cannot be decided by reasoned argument but...must be pre-empted by a system of faith whose acceptability is determined not by its rational basis, but by its appositeness to the inheritance that is ours" (Scruton *et al.*, 1985, p. 46). Further, Scruton *et al.* argue, religious instruction ". . . can . . . be a warm sustaining part of that moral education without which no child can survive in the world. Religion shores up the certainties of morality with vague but deep foundations" (*op cit.*, p. 46). Here Scruton *et al.* are on much weaker ground because of the manifest controversy which arises in relation to the religious domain and the extent to which open-mindedness in relation to it seems possible, desirable and necessary.

Many aspects of the moral domain seem to invite and require open-mindedness on the part of students in a fairly straightforward way in virtue of the fact that they involve in different ways scope for judgement and reasonable differences of view. Discussion and enquiry is therefore valuable and necessary in relation to many aspects of moral education (on this see, for example, Haydon, 2003, pp. 328-330; Sprod, 2001) together with related forms of reflection and participation to which open-mindedness is central (on the role of open-mindedness in discussion see Hare, 1979, pp. 112-124). Matters which require attention in such a process and which demand open-mindedness include familiar first order moral problems, conflicts and dilemmas as well as second order reflection on theoretical and meta-ethical issues relating to the nature of the moral and ethical domain.

On first order moral problems, conflicts and dilemmas, it is important to note that these need not be seen in abstract terms in the manner of Kohlberg but may relate to the aspects of the concrete moral lives which the students are, or may, be leading. Indeed, judgement seems central not just to moral problems, conflicts and dilemmas, but also to the fine-grained details of daily moral life itself (Smith, 1997). To the extent that judgement is central to the moral life, and open-mindedness is central to judgement, open-mindedness seems central to the moral life and important as an aim in moral education.

In relation to second-order reflection on theoretical and meta-ethical issues relating to the nature of the moral and ethical domain, it seems appropriate and necessary for students at an appropriate stage to reflect

upon such matters. Charles Larmore draws attention to the respects in which the phenomena with which moral philosophers deal is characterised by complexity which is not only contingently unmastered, but constitutive of the moral domain. These elements of complexity include the absence of any explicit decision procedure for settling moral questions (and therefore the need for judgement), the distinction between personal and political ideals and realms, and the heterogeneity of morality (which is resistant both to claims that there is a single source of moral value and that moral conflict can be eliminated) (Larmore, 1987, pp. ix-xiv). Moral reflection on the part of students should extend to questions about the extent to which some moral values can be said to be universal in significance and application (on this matter see, for example, Nussbaum, 2000) and here, as elsewhere, the issues at stake cannot be separated out from wider social and political considerations (for a discussion of significant contemporary issues of these kinds see Scruton, 2002). Broader reflection on moral and ethical issues may lead to the student achieving what Charles Taylor calls a 'disencapsulated' view of the human condition. Of this condition Taylor writes ". . . each of our cultures is one possibility among many. People can and do live human lives in all of them. To be able to understand this sympathetically — or at least to understand some small subset of the range of cultures, and realize that one ought ideally to understand more — is to have a truer grasp of the human condition than that of people for whom alternative ways are utterly inconceivable" (Taylor, 1993, p. 229). Open-minded reflection of these kinds on the nature of the moral domain is clearly part of the liberal educational ideal (on this ideal see, for example, Nussbaum, 1997).

Moral education cannot therefore exclude the aim of open-mindedness. The demands of this aim on moral education are extensive. For example, I have argued elsewhere that the moral task of the common school requires the tackling of issues of moral texture and complexity which involve the development in students of capacities of moral discrimination in relation to distinctions, interrelationships and interfaces of moral significance between the 'public' and 'non-public' domains in liberal democratic societies (McLaughlin, 2003). It should be noted that open-mindedness on the part of students with respect to moral and ethical matters is not something which teachers have to necessarily encourage against the grain. Charles Taylor insists that questioning about morality derives as much from the actual experience of moral diversity as it does from any metaphysical speculation (Taylor, 1993, p. 208). Many students will be drawn to thinking about moral questions in an open-minded way from their experience of contemporary life.

In the light of our discussion it might seem, therefore, that open-

mindedness is appropriate as an aim in moral education in relation to *certain aspects* of the moral domain (perhaps quite wide-ranging ones) but that in relation to basic and fundamental aspects of this domain the 'limits of open-mindedness' apply. Whilst this is an attractive conclusion, I do not think that it is satisfactory as it stands. We need to return to the discussion in the last section.

Before proceeding to the main point which is significant here, it is necessary to note that considerations relating to 'reason' and to 'evidence' and 'argument' should not be dismissed too easily from educational processes relating to basic and fundamental aspects of the moral domain. A familiar point is that ' the paradox of moral education' requires initial habituation to be enriched by subsequent development of the capacity to reason: here reasoning is postponed not abandoned (Peters, 1974). White holds that the development of altruistic dispositions should be accompanied by reason-giving (White, 1990, p. 51. See also pp. 39-40, 48-49, Ch 4). It is also important to note generally that the virtue approach to moral education is not devoid of thinking, reasoning and judgement of appropriate kinds (see, for example, Haydon, 2003, pp. 325-328).

One issue which arose in the last section is the form which reason, evidence and argument could be said to take in relation to the basic and fundamental aspects of the moral domain. Consideration is needed of the extent to which forms of reason, evidence and argument can be seen as implicit in concepts such as 'seriousness' and 'authorship' , which Sabina Lovibond sees as central to ethical upbringing (Lovibond, 2002, esp Part II) and the extent to which they can be located in relation to notions such as self-knowledge (Hamlyn, 1983) and knowledge of others, which is arguably central to ethical understanding and commitment. Bernard Williams makes an important point in insisting that there is something inherently indeterminate about a rational deliberative process in that it is essentially 'heuristic' and 'imaginative' and "...there are no fixed boundaries on the continuum from rational thought to inspiration and conversion" (Williams, 1981, p. 110). Points such as these may be seen as expanding what can count as reason, evidence and argument in the moral domain and therefore making room for open-mindedness to operate in relation to basic and fundamental aspects of the moral domain.

The problem remains, however, that there seems to be something objectionable or troubling about a willingness to revise one's basic or fundamental moral commitments. Of a commitment to keeping a promise Hare writes "Clearly, open-mindedness here does not involve searching around for reasons which would show that we should not keep our promises . . . . But the open-minded person will not treat these as *absolute*, for some consideration might show that the commitment

should not be honoured, ie., if some consideration overrides the commitment" (Hare, 1979, p. 40). Hare's point here is 'within' the practice of promise keeping. What would one say of a person who was willing to revise his or her commitment to promise keeping *tout court*?

Despite the force of arguments about the 'limits of open-mindedness' with respect to basic or fundamental aspects of the moral domain it is necessary to note that it is important for students to appreciate the nature of the basicality and fundamentality of these aspects of the moral domain. They should therefore not be discouraged from thinking about them. Further, a grasp of these aspects of the moral domain are important for an ability to reason about other aspects of the moral domain, and these basic or fundamental aspects may themselves require interpretation and application (in relation, for example, to a need to clarify how [say] racism is to be properly understood). In addition, since what is basic and fundamental in the moral domain is, to some extent, disputed, any restriction of thought in relation to these matters is potentially damaging to the intellectual autonomy of students. One should therefore be hesitant in accepting too quickly claims about the 'limits of open-mindedness' with respect to basic and fundamental aspects of the moral domain.

It is true that a teacher may not regard the promotion of open-mindedness in relation to these aspects of the moral domain as a priority, and will be aware of the dangers of encouraging too sweeping a reconsideration of basic and fundamental moral demands (on this matter see, for example, Sprod, 2001, esp. pp. 198-202).

It has been suggested by Peter Gardner that open-mindedness involves as necessary conditions not merely a *revision* condition (that a person is prepared to revise his or her position with regard to p in the light of new evidence or argument) but also two further conditions: a *questioning* condition (that a person continues to entertain questions about p), and a *welcoming* condition (that a person is willing to welcome considerations which would lead to the revision of his or her belief) (Hare & McLaughlin, 1998, p. 286). However, only the revision condition is necessary in general for open-mindedness. The other conditions are criteria for the attribution of open-mindedness in particular cases and contexts. In certain contexts (for example, daily moral life) open-mindedness does not require that a person actively question certain of his or her basic or fundamental moral beliefs, or welcome considerations in opposition to what is believed. Open-mindedness in such contexts merely requires that the person is able and willing to attend to such considerations if attention is drawn to them. Open-mindedness does not therefore always require a strong emphasis on questioning or the welcoming of criticism. In certain contexts in moral education, open-

mindedness in relation to basic and fundamental aspects of the moral domain may properly be sought (particularly in a situation (say) where philosophical reflection upon the moral domain is being encouraged) but this need not result in the destabilising of basic and fundamental moral beliefs (and their accompanying sensitivities, judgements and commitments) on the part of the student, especially if he or she can be brought to see the force of the basicality and fundamentality of the moral aspects at stake. After all, whilst open-mindedness requires the revision condition, it does not require that the person actually revise their beliefs.

Conclusion

The case for open-mindedness as an aim in moral education in relation to many aspects of the moral domain is strong. Whilst it is tempting to consider that in relation to basic and fundamental aspects of the moral domain, the 'limits of open-mindedness' have been reached, this conclusion should not be drawn too quickly. I have given grounds for considering that in relation to these aspects of moral education there is also room for open-mindedness to operate as an aim.

In these matters much depends on the pedagogic judgement of the teacher in discerning when and how to balance open-mindedness with the other aims of moral education. In the case of open-mindedness in relation to the basic or fundamental aspects of the moral domain, the teacher needs to judge *inter alia* the developmental needs of the students and their motives. It is one thing to call into question basic or fundamental aspects of morality from the motive of philosophical curiosity on the one hand and from amoralism or a desire to disrupt the lesson on the other.

The present discussion has been necessarily brief and many complex further issues have been left to one side (for example, the differing mandate for influence in moral matters enjoyed by common schools and by separate religious schools).

The place of open-mindedness as an aim in moral education is not easy to pin down with any ease or precision. It has been argued here, however, that open-mindedness cannot easily be excluded as an aim in moral education, even in relation to the most basic and fundamental aspects of the moral domain.

Notes

[1] Scruton *et al.* express an opposition to bias and indoctrination in schools and a commitment to the development in students of "... an open mind, and ... a disposition to consider the reasons for each conclusion before accepting it"

(Scruton *et al.*, 1985 p.15). Education, they insist, must respect the 'intellectual autonomy' of the student: "... only if a pupil is able to make up his own mind, on the basis of evidence and reason, does he acquire a true understanding of the conclusions at which he arrives" (*ibid*). Scruton *et al.* therefore express a general opposition to the various processes through which a 'closed mind' is developed in students (Scruton *et al.*, 1985 esp Ch 2).

[2] On these complexities see, for example, Gardner 1993, 1996; Hare 1979; Hare & McLaughlin 1994, 1998.

[3] Thus they argue that the finite human mind "... cannot provide reasons for those things which it must assume in the very attempt to provide reasons" (Scruton *et al.*, 1985 p.15).

[4] Charles Taylor describes the 'foundationalist model of reasoning' as understanding rational justification as "...[a] effected on the basis of criteria, [b] judging between fully explicit positions, and [c] yielding in the first instance absolute judgements of adequacy or inadequacy, and comparative assessments only mediately from these" (Taylor 1993 p. 230).

[5] Compare the seven examples of wider dispositions outlined in White 1990, p.70 and the discussion in ch. 4.

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How To Be Open-Minded Without Your Brains Falling Out

Michael Shermer
Skeptics Society and Skeptic *Magazine*

In a 1964 lecture at Cornell University, the Nobel laureate and Caltech physicist Richard Feynman explained to an audience of would-be scientists the three steps in discovering a new law in nature:

> How do we look for a new law? First, we guess it. Don't laugh. That's really true. Then we compute the consequences of the guess to see what it implies. Then we compare those computation results to nature, or to experiment, or to experience, or to observation, to see if it works. If it disagrees with experiment, it is wrong. In that simple statement is the key to science. It doesn't make any difference how beautiful your guess is, how smart you are, who made the guess, or what his name is. If it disagrees with experiment, it's wrong. That's all there is to it.[1]

Is that all there is to it? Well, not exactly. If your name is Feynman — or Einstein, Hawking, Dawkins, or Gould — you may initially receive a more favorable hearing. But as Hollywood pundits say about the extensive studio promotion of a film, a big name or a big promotion will only buy you a week — after that it stands or falls on its own merits. An example of this can be found in an interesting contrast between two different authors from self-published books that came out in 2002, both purporting to revolutionize science. Here are quotes from each author:

> This book is the culmination of nearly twenty years of work that I have done to develop that new kind of science. I had never expected it would take anything like as long, but I have discovered vastly more than I ever thought possible, and in fact what I have done now touches almost every existing area of science, and quite a bit besides. I have come to view [my

> discovery] as one of the more important single discoveries in the whole history of theoretical science.
>
> The development of this work has been a completely solitary effort during the past thirty years. As you will realize as you read through this book, these ideas had to be developed by an outsider. They are such a complete reversal of contemporary thinking that it would have been very difficult for any one part of this integrated theoretical system to be developed within the rigid structure of institutional science.

Both authors worked in isolation for decades. Both make equally extravagant claims about overturning the foundations of physics in particular and science in general. Both shunned the traditional route of peer-reviewed scientific papers and instead chose to take their ideas straight to the public through popular tomes. And both texts are filled with hundreds of self-produced diagrams and illustrations allegedly revealing the fundamental structures of nature.

There is one distinct difference between the two authors: one was featured in *Time, Newsweek, Wired*, and his book was reviewed in the *New York Times*. The other author has been completely ignored, with the exception of being the subject of an exhibition in a tiny Southern California art museum. Their bios help clarify these rather different receptions.

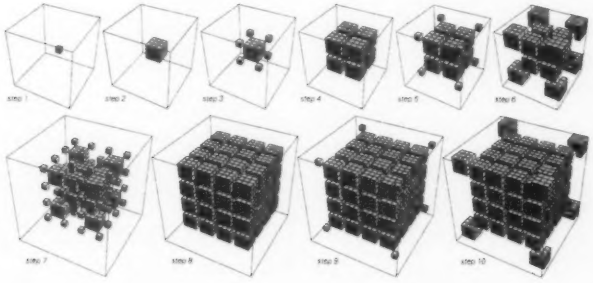
One of the authors earned his Ph.D. in physics at age 20 at Caltech where Richard Feynman called him "astonishing," and was the youngest to ever win a prestigious MacArthur "genius" award. He founded an institute for the study of complexity at a major university, then quit to start his own software company where he produced a wildly successful computer program used by millions of scientists and engineers. The other author is a former abalone diver, goldminer, filmmaker, cave-digger, repairman, inventor, proprietor of a company that designs and builds underwater lift bags, and the owner-operator of a trailer park. Can you guess the authors and who penned which quote?

The first comes from Stephen Wolfram (2002), the Caltech whiz and author of *A New Kind of Science*, in which the fundamental structure of the universe and everything in it is reduced to computational rules and algorithms that produce complexity in the form of cellular-automata.[2] The second comes from James Carter (2002), the abalone diver and author of *The Other Theory of Physics*, proffering a "circlon" theory of the universe, where all matter is founded on these hollow, ring-shaped tubes that link everything together, from atoms to galaxies (See Figure 1).[3]

Figure 1

Nitrogen-15

James Carter's theory bases the structure of the entire universe — from atoms to galaxies — on the "circlon," "hollow, ring-shaped, mechanical particles that are held together within the nucleus by their physical shapes," as shown here in the Nitrogen-15 atom.



Stephen Wolfram claims that the entire universe is a big cellular-automaton computer in which complexity can be generated from a handful of simple computational rules and algorithms. Image from *A New Kind of Science*, p. 183, an example of "three-dimensional cellular automata, but now with rules that depend on all 26 neighbors that share either a face or a corner with a particular cell." Here "the rule specifies that a cell should become black when exactly one of its 26 neighbors was black on the step before." Available at http://www.wolframscience.com/preview/nks_pages/?NKS0183.gif

Whether Wolfram is right remains to be seen, but eventually we will find out because his ideas will be tested in the competitive marketplace of science. We will never know the veracity of Carter's ideas because they will never be taken seriously by scientists. Why? Because, like it or not, in science, as in most human intellectual endeavors, who is doing the saying matters as much as what is being said, at least in terms of getting an initial hearing. (If Wolfram is wrong his theory will go the way of phlogiston, aether, and, well, the circlon.)

Science is, in this sense, conservative and sometimes elitist. It has to be in order to survive in a surfeit of would-be revolutionaries. Given limited time and resources, and the fact that for every Stephen Wolfram there are a hundred James Carters, one has to be selective. There needs to be some screening process whereby true revolutionary ideas are weeded out from ersatz ones. Enter the skeptics. We (myself and my colleagues at the Skeptics Society and *Skeptic* magazine) are interested in the James Carters of the world, in part because in studying how science goes wrong we learn how it can go right. But we also explore the interstices between science and pseudoscience because it is here where the next great revolution in science may arise. Although most of these ideas will join phlogiston on the junk heap of science — you never know until you look more closely.

How should we do that? The key is in keeping an open mind; but not so open that your brains fall out. That exquisite balance was succinctly summarized in a 1987 lecture on "The Burden of Skepticism" by the astronomer Carl Sagan:

> It seems to me what is called for is an exquisite balance between two conflicting needs: the most skeptical scrutiny of all hypotheses that are served up to us and at the same time a great openness to new ideas. If you are only skeptical, then no new ideas make it through to you. On the other hand, if you are open to the point of gullibility and have not an ounce of skeptical sense in you, then you cannot distinguish useful ideas from the worthless ones.[4]

Is it the case that some people prefer orthodoxy while others prefer heresy? Is there a personality trait — a temperament tendency as it were — for tradition, and another for change? This is an important question because the answer helps explain why in the history of science some chose to support radical new ideas while others opposed them, and who today (or even tomorrow) will choose to support the status quo versus the cutting edge.

To get at this question the University of California Berkeley psychologist Frank Sulloway and I conducted research into the personality of such individual scientists as Carl Sagan who embodied this exquisite

balance. We began by examining Sagan in context, comparing him to the other pioneers in the Search for Extraterrestrial Intelligence, or the SETI program. When Sagan began his studies in astronomy, the idea of searching for extraterrestrial life of any kind, intelligent or otherwise, was considered to be the province of fringe cranks. By the time of his death in 1996, however, Sagan's heresy had become orthodoxy. In early 2000, for example, a book was published entitled *Rare Earth*. The authors, Peter Ward and Donald Brownlee, were featured in the *New York Times* as radicals for daring to challenge orthodox science that the cosmos is probably teaming with complex life: "Now, two prominent scientists say the conventional wisdom is wrong."[5] In three decades Sagan changed the theory from heresy to orthodoxy, even though there still exists not one iota of concrete evidence of any life, simple or complex, intelligent or not, anywhere beyond Earth.

In 1990 David Swift published a book entitled *SETI Pioneers: Scientists Talk About Their Search for Extraterrestrial Intelligence*, in which he identified an interesting trend: there is an overabundance of firstborns in this cohort, including Sagan.[6] But is it a statistically significant overabundance? Swift did not test for this, but Sulloway and I did. For the SETI pioneer group eight is the expected number of firstborns based on the number of siblings they had, but twelve is the observed number. This difference is statistically significant at the 95 percent level of confidence.[7] What does this finding mean? In Sulloway's 1996 book, *Born to Rebel*, he presents a summary of 196 controlled birth-order findings classified according to what is known as the Five Factor Model of personality:

> *Conscientiousness*: Firstborns are more responsible, achievement oriented, and planful.
>
> *Agreeableness*: Laterborns are more easygoing, cooperative, and popular.
>
> *Openness to Experience*: Firstborns are more conforming, traditional, and closely identified with parents.
>
> *Extroversion*: Firstborns are more extroverted, assertive, and likely to exhibit leadership.
>
> *Neuroticism*: Firstborns are more jealous, anxious, and fearful.[8]

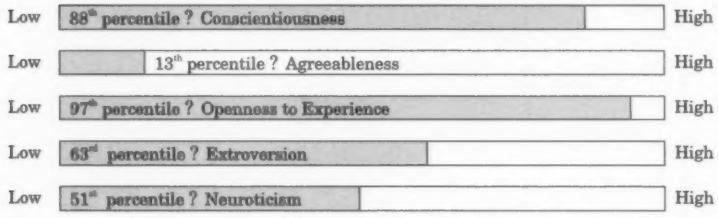
To measure Sagan's personality Sulloway and I requested a number of his family members, friends, and colleagues to rate him on the standardized Five Factor Model inventory of forty descriptive adjectives using a nine-step scale. For example: *I See Carl Sagan as Someone Who was . . .*

Ambitious/hardworking 1 2 3 4 5 6 7 8 9 Lackadaisical

Tough-minded 1 2 3 4 5 6 7 8 9 Tender-minded
Assertive/dominant 1 2 3 4 5 6 7 8 9 Unassertive/submissive
Organized 1 2 3 4 5 6 7 8 9 Disorganized
Rebellious 1 2 3 4 5 6 7 8 9 Conforming

Figure 2 presents the results for Sagan in percentile rankings relative to Sulloway's database of over 100,000 subjects. (To measure the consistency between raters we computed an interrater reliability score of .73 for the six raters who participated, more than acceptable by social science standards.)[9]

Figure 2



Carl Sagan's Personality Profile from the Five Factor Model

Most consistent with his firstborn status was Sagan's exceptionally high ranking on *conscientiousness* (ambitiousness, orderliness, dutifulness) and his strikingly low ranking on *agreeableness* (tender-mindedness, easy-goingness, modesty). *Extroversion* and *neuroticism* were middle of the road, but Sagan's *openness to experience* (preference for novelty, variety, adventurousness) was nearly off the scale, significantly higher than what one would expect from a firstborn. How can we reconcile this disparity? In Sulloway's family dynamics model he reveals a number of variables that shape personality:[10]

> *Social Attitudes*: "People who are socially liberal are more open to radical change."

As Sagan's biographers demonstrated in their narrative descriptions of Sagan, and as I showed in a quantitative analysis of his publications and interviews about social issues, Sagan was extremely liberal.[11]

> *Parental Social Attitudes*: "People having liberal parents tend to be liberal and hence to support radical change."

According to his biographers, Sagan's parents were both socially liberal. Plus, members of many minority groups (Jewish in Sagan's case) tend to support liberal causes and are more open to experience.

Personal Influences: "Mentoring and friendship influence the adoption of radical ideas."

On the latter influence, as a graduate student at the University of Chicago, Sagan befriended Joshua Lederberg, whom Keay Davidson calls "the godfather of exobiology," the meeting of which launched "the most high-profile dynamic duo of the early days of exobiology, the science of extraterrestrial life." Sagan also worked closely with Nobel laureate H. J. Muller, and in 1976 wrote Lederberg: "if not for the encouragement by H. J. Muller and yourself, I might not have had the courage to seriously pursue what later has come to be called exobiology." As Davidson described it: "The older scientist did more than talk; he escorted Sagan into the corridors of power." Lederberg characterized the relationship as such: "I was often his protector and defender from folks who thought he was wild. He had a lot of offbeat ideas. They were always at some level not illogical, and some of them could prove to be right; and I would point out [to others] the value of listening closely to someone who has that degree of rigor and imagination at the same time."[12]

Sagan's high conscientiousness occasionally clashed with his high openness. Lederberg recalls: "He didn't stick to things very long. I think part of his reputation for not being 'solid' has less to do with lack of rigor on any one item than that he didn't build a body of work on one particular topic. His interests were so catholic."[13] Actually this is what Sulloway's family dynamics model predicts. Sagan's openness to experience led him to gamble on a number of revolutionary ideas, but his conscientiousness prevented him from taking these ideas too far into crankdom.

If we view SETI as high culture and UFOs as low culture, then we should not be surprised to see a personality like Sagan's support the former and reject the latter. This is the "essential tension" described by Thomas Kuhn in his apt distinction between normal science and revolutionary science, between tradition and change.[14] Science is normally conservative, yet to progress it must occasionally relinquish ground to revolutionaries who have built enough of a foundation to grab a foothold. Sagan was masterful at finding that exquisite balance.

In this context, in a 1998 study Sulloway and I found that openness was significantly correlated with lower levels of religiosity ($r=-.14$, $p<.0001$) and higher levels of religious doubt ($r=.18$, $p<.0001$). Moreover, openness was significantly correlated with change in religiosity, with higher openness scores being associated with lowered piety with increas-

ing age ($r=-.09$, $p<.01$), as well as with lower rates of church attendance ($r=-.11$, $p<.01$). Not surprisingly, we also found a strong correlation between openness and political liberalism ($r=.28$, $p<.0001$).[15] These findings gel with Sagan's personality and attitudes toward SETI and religion, where he was a passionate believer in the former and a skeptic of the latter.

This hypothesis is supported by answers offered by our raters when asked to describe Sagan's unique thinking style.[16] Astronomer David Morrison wrote: "Analytical, big-picture, great with students, excellent team member, probing and curious, ready to pursue unconventional paths, highly original thinker." Sagan's brother-in-law, Les Druyan, recalled: "In discussions Carl was scrupulously honest, always willing to admit to any flaws in his own argument; he had an uncanny memory for facts; his logic was wonderfully simple and clearly explained; he had the ability to discuss things on the same level as the person(s) he was with, from seven-year-olds to rocket scientists." Poundstone well captured the essential tension:

> Strengths: He had an almost phenomenal ability to look at a raw data set and see connections that no one else did. He was thereby able to pose the interesting "big" questions that are the starting point of most important research. Weaknesses: Lack of follow-through. He had no patience for hands-on experimental work or the high-powered math that is the basis of most theoretical work. Having posed an interesting question, his impulse was to move on, to pose other interesting questions.

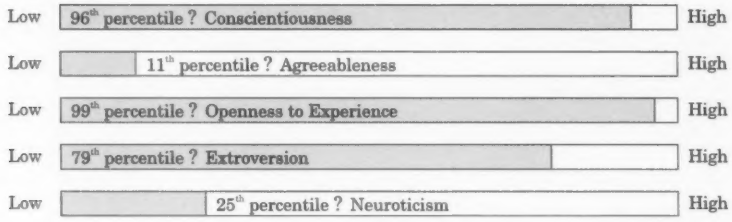
Thomas McDonough, who was a graduate student of Sagan's at Cornell and later his colleague through the Planetary Society, noted the strain between Sagan's rebelliousness and his ambitions:

> He was not afraid of controversy, indeed, he seemed to thrive on it. Thus he advocated SETI when it was highly disapproved of by the scientific establishment. It threatened to abort his career because it was so disreputable. [Yet] sometimes he went out of his way to insult his enemies even when it was irrelevant. For example, once at a public lecture on space exploration for The Planetary Society, he attacked Republicans even though it had nothing to do with the talk and undoubtedly alienated a good part of the audience.

This tension in Sagan's personality is the key to understanding the exquisite balance between tradition and change: high openness led Sagan to pioneer the search for extraterrestrial intelligence, but his high conscientiousness made him skeptical of UFOs. His low agreeableness meant he did not suffer fools gladly, which can be a virtuous trait in the skeptical business.

Complementing this analysis, Sulloway and I distributed the same survey to eight of Stephen Jay Gould's friends and colleagues, with almost identical results (that included a .92 interrater reliability score),[17] summarized in Figure 3.

Figure 3



Stephen Jay Gould's Personality Profile from the Five Factor Model

Sagan and Gould were not only close friends and colleagues, they shared many of the same skeptical attitudes and tendencies (not to mention family background and cultural upbringing), leading us to hypothesize that one key to finding the exquisite balance is being exceptionally open-minded while simultaneously maintaining high conscientiousness and tough-mindedness, which is a standard indicator of low agreeableness. No one exhibits a personality trait all of the time, of course. These traits are variable tendencies, but as such we can understand why some people tend toward orthodoxy while others tend toward heresy. The balance between the two is what allows science to operate so effectively, and science has demonstrated how and why this should be so. But does it always work this way? No, but of all human social traditions nowhere is the trait of open-mindedness more consistently exhibited than in science.

As a personal example of this process, in one of my monthly columns in *Scientific American*, about the Fox television program claiming that the moon landing was hoaxed,[18] I said that the reason there was no rocket exhaust from the lunar lander is that there is no atmosphere on the moon. I was partially wrong. The lack of an atmosphere plays a minor role; the main reason is that the LEM engine used hypergolic propellants (DiNitrogen Tetroxide and AeroZine 50) that ignite upon contact and burn very cleanly (compare the Space Shuttle's nearly invisible rocket flame to the very visible solid rocket boosters' exhaust plume). There was no shortage of letters from readers calling my attention to the error.

This process of critical feedback is the lifeblood of science, as is the willingness (however begrudgingly) to say "I was wrong" in the face of overwhelming evidence to the contrary. To do so requires a certain level of open-mindedness. By contrast, pseudoscientists typically eschew the peer-review process in order avoid the inevitable critical commentary that is an integral part of healthy science. Consider, for example, Immanuel Velikovsky's controversial theory about planetary collisions first proffered in 1950. Velikovsky was not a scientist and he rejected the peer review process after submitting a paper to the prestigious journal *Science*. "My [paper] was returned for rewriting after one or two reviewers took issue with my statement that the lower atmosphere of Venus is oxidizing. I had an easy answer to make ... but I grew tired of the prospect of negotiating and rewriting." Nearly a quarter of a century later, after a special session devoted to his theory was organized by Carl Sagan at the 1974 AAAS meeting, Velikovsky boasted that "my *Worlds in Collision*, as well as *Earth in Upheaval*, do not require any revisions, whereas all books on terrestrial and celestial science of 1950 need complete rewriting...and nobody can change a single sentence in my books." The unwillingness to submit to peer review, and the inability to admit error are the antithesis of good science and open-mindedness.[19]

A splendid example of honorable science can be found in the May 11, 2001 issue of *Science*, in a report on the "African Origin of Modern Humans in East Asia." A team of Chinese and American geneticists sampled 12,127 men from 163 Asian and Oceanic populations, tracking three genetic markers on the Y chromosome. What they discovered was that every one of their subjects carried a mutation at one of these three sites that can be traced back to a single African population some 35,000 to 89,000 years ago. Their modestly worded conclusion that "the data do not support even a minimal in situ hominid contribution in the origin of anatomically modern humans in East Asia," is, in fact, a major victory for the "Out-of-Africa" hypothesis that suggests all modern people can trace their heritage to Africa. It is also a significant blow against the "Multiregional" hypothesis that argues modern human populations had multiple origins dating back many hundreds of thousands of years. The finding corroborates earlier mitochondrial DNA (mtDNA) studies, the fossil record, and a remarkable discovery that Neanderthal DNA shows no signs of interbreeding with humans living contemporaneously.

One of the chief defenders of Multiregionalism, anthropologist Vince Sarich from U.C. Berkeley, is well known for his vigorous and energetic defense of his beliefs and theories. (I know Vince and can attest to the fact that he is a tenacious fighter for his views.) Yet when this self-proclaimed "dedicated Multiregionalist" saw the new data, he confessed: "I have

undergone a conversion — a sort of epiphany. There are no old Y chromosome lineages [in living humans]. There are no old mtDNA lineages. Period. It was a total replacement." In other words, in a statement that takes great intellectual courage and open-mindedness to make, Sarich said "I was wrong."[20]

Whether Sarich is wrong about his conversion remains to be seen, as additional studies confirm or deny the findings (and one staunch defender of the beleaguered hypothesis told me that Vince was never really a Multiregionalist and that this study disproves nothing). The point is that creationists and social critics who decry science as dogmatic obedience to authority and an old-boys network of closed-minded fogies are simply wrong. Science is in constant flux, theories are battered about by the always-shifting winds of evidence, and scientists really do change their minds.

What are some additional characteristics of those who have an open mind and those who do not? One of the pioneers of the modern skeptical movement, Martin Gardner, dedicated his first book to this very question. In 1952 Gardner published a book titled *In the Name of Science*, with the descriptive subtitle "An entertaining survey of the high priests and cultists of science, past and present." Published by Putnam, the book sold so poorly that it was quickly remaindered and lay dormant until 1957, when it was republished by Dover and has come down to us as *Fads and Fallacies in the Name of Science*, still in print and arguably *the* skeptic classic of the past half century.[21]

The "hermit scientist," a youthful Gardner wrote half a century ago, works alone and is ignored by mainstream scientists. "Such neglect, of course, only strengthens the convictions of the self-declared genius." Gardner, however, was wrong by half in his prognostications: "The current flurry of discussion about Velikovsky and Hubbard will soon subside, and their books will begin to gather dust on library shelves." While Velikovskians are a quaint few surviving in the interstices of fringe culture, L. Ron Hubbard has been canonized by the Church of Scientology and deified as the founding saint of a world religion.

In 1952 Gardner could not have known that the nascent flying saucer craze would turn into an alien industry: "Since flying saucers were first reported in 1947, countless individuals have been convinced that the earth is under observation by visitors from another planet." Absence of evidence then was no more a barrier to belief than it is today, and UFOlogists proffered the same conspiratorial explanations for the dearth of proof: "I have heard many readers of the saucer books upbraid the government in no uncertain terms for its stubborn refusal to release the 'truth' about the elusive platters. The administration's 'hush-hush policy'

is angrily cited as proof that our military and political leaders have lost all faith in the wisdom of the American people."

From his perspective half a century ago Gardner was even then bemoaning the fact that some beliefs never seem to go out of vogue, as he recalled H. L. Mencken's quip from the 1920s "that if you heave an egg out of a Pullman car window anywhere in the United States you are likely to hit a fundamentalist." Gardner cautions that when presumably religious superstition should be on the wane how easy it is "to forget that thousands of high school teachers of biology, in many of our southern states, are still afraid to teach the theory of evolution for fear of losing their jobs." Today, Kansas and other states enjoin the fight as the creationist virus spreads northward.

Thankfully there has been some progress since Gardner published his first criticisms of pseudoscience. Now largely antiquated are Gardner's chapters on believers in a flat-earth, a hollow earth, Atlantis and Lemuria, as well as such personalities as Immanuel Velikovsky Alfred William Lawson, Roger Babson, Trofim Lysenko, Wilhelm Reich, and Alfred Korzybski. But, disturbingly, a good two-thirds of the book's contents are relevant today, including homeopathy, naturopathy, osteopathy, iridiagnosis (reading the iris of the eye to determine bodily malfunctions), food faddists, cancer cures and other forms of medical quackery, Edgar Cayce, the Great Pyramid's alleged mystical powers, handwriting analysis, ESP and PK, reincarnation, dowsing rods, eccentric sexual theories, and theories of group racial differences (excluding such differences as susceptibility to certain diseases, etc.).

And the motives of the "hermit scientists" have not changed either. Gardner recounts the day that Groucho Marx interviewed Louisiana State Senator Dudley J. LeBlanc about a "miracle" cure-all vitamin and mineral tonic called Hadacol that the Senator had invented. When Groucho asked him what it was good for, LeBlanc answered with uncharacteristic honesty: "It was good for five and a half million for me last year."

What is particularly valuable about Gardner's views are his insights into the differences between science and pseudoscience and, for our purposes here, the relative balance of open-mindedness. On the one extreme we have ideas that are most certainly false, "such as the dianetic view that a one-day-old embryo can make sound recordings of its mother's conversation." In the borderlands middle "are theories advanced as working hypotheses, but highly debatable because of the lack of sufficient data," and for this Gardner selects a most propitious example: "the theory that the universe is expanding." That theory would now fall onto the spectrum at the other extreme end of "theories almost

certainly true, such as the belief that the earth is round or that men and beasts are distant cousins."

How can we tell if someone is a scientific crank? Gardner offers this advice: (1) "First and most important of these traits is that cranks work in almost total isolation from their colleagues." Cranks typically do not understand how the scientific process works — that they need to try out their ideas on colleagues, attend conferences, and publish their hypotheses in peer-reviewed journals before announcing to the world their startling discovery. Of course, when you explain this to them they say that their ideas are too radical for the conservative scientific establishment to accept. (2) "A second characteristic of the pseudo-scientist, which greatly strengthens his isolation, is a tendency toward paranoia," which manifests itself in several ways:

> (1) He considers himself a genius. (2) He regards his colleagues, without exception, as ignorant blockheads. (3) He believes himself unjustly persecuted and discriminated against. The recognized societies refuse to let him lecture. The journals reject his papers and either ignore his books or assign them to "enemies" for review. It is all part of a dastardly plot. It never occurs to the crank that this opposition may be due to error in his work. (4) He has strong compulsions to focus his attacks on the greatest scientists and the best-established theories. When Newton was the outstanding name in physics, eccentric works in that science were violently anti-Newton. Today, with Einstein the father-symbol of authority, a crank theory of physics is likely to attack Einstein. (5) He often has a tendency to write in a complex jargon, in many cases making use of terms and phrases he himself has coined.

These criteria led me to create an educational tool relevant to the theme of this special issue, called the *Baloney Detection Kit*,[22] inspired by Carl Sagan's discussion of detecting "baloney" in his book *The Demon-Haunted World*.[23] In this "Baloney Detection Kit," I suggest ten questions to ask when encountering any claim, that can help us decide if we are being too open-minded in accepting it or too closed-minded in rejecting it:

1. How reliable is the source of the claim? As Daniel Kevles showed so effectively in his 1999 book *The Baltimore Case*,[24] in investigating possible scientific fraud there is a boundary problem in detecting a fraudulent signal within the background noise of mistakes and sloppiness that is a normal part of the scientific process. The investigation of research notes in a laboratory affiliated with Nobel laureate David Baltimore by an independent committee established by Congress to investigate potential fraud, revealed a surprising number of mistakes. But science is messier than most people realize. Baltimore was exonerated when it became clear that there was no purposeful data manipulation.

2. Does this source often make similar claims? Pseudoscientists have a habit of going well beyond the facts, so when individuals make numerous extraordinary claims they may be more than just iconoclasts. This is a matter of quantitative scaling, since some great thinkers often go beyond the data in their creative speculations. Cornell's Thomas Gold is notorious for his radical ideas, but he has been right often enough that other scientists listen to what he has to say. Gold proposes, for example, that oil is not a fossil fuel at all, but the by-product of a deep hot biosphere. Hardly any earth scientists I have spoken with take this thesis seriously, yet they do not consider Gold a crank. What we are looking for here is a pattern of fringe thinking that consistently ignores or distorts data.

3. Have the claims been verified by another source? Typically pseudoscientists will make statements that are unverified, or verified by a source within their own belief circle. We must ask who is checking the claims, and even who is checking the checkers? The biggest problem with the cold fusion debacle, for example, was not that Stanley Pons and Martin Fleischman were wrong; it was that they announced their spectacular discovery before it was verified by other laboratories (at a press conference no less), and, worse, when cold fusion was not replicated they continued to cling to their claim.

4. How does the claim fit with what we know about how the world works? An extraordinary claim must be placed into a larger context to see how it fits. When people claim that the pyramids and the sphinx were built over 10,000 years ago by an advanced race of humans, they are not presenting any context for that earlier civilization. Where are the rest of the artifacts of those people? Where are their works of art, their weapons, their clothing, their tools, their trash? This is simply not how archaeology works.

5. Has anyone gone out of the way to disprove the claim, or has only confirmatory evidence been sought? This is the *confirmation bias*, or the tendency to seek confirmatory evidence and reject or ignore disconfirmatory evidence. The confirmation bias is powerful and pervasive and is almost impossible for any of us to avoid. It is why the methods of science that emphasize checking and rechecking, verification and replication, and especially attempts to falsify a claim, are so critical.

6. Does the preponderance of evidence converge to the claimant's conclusion, or a different one? The theory of evolution, for example, is proven through a convergence of evidence from a number of independent lines of inquiry. No one fossil, no one piece of biological or paleontological evidence has "evolution" written on it; instead there is a convergence of evidence from tens of thousands of evidentiary bits that adds up to a story of the evolution of life. Creationists conveniently ignore this conver-

gence, focusing instead on trivial anomalies or currently unexplained phenomena in the history of life.

7. Is the claimant employing the accepted rules of reason and tools of research, or have these been abandoned in favor of others that lead to the desired conclusion? UFOlogists suffer this fallacy in their continued focus on a handful of unexplained atmospheric anomalies and visual misperceptions by eyewitnesses, while conveniently ignoring the fact that the vast majority (90 to 95 percent) of UFO citings are fully explicable with prosaic answers.

8. Has the claimant provided a different explanation for the observed phenomena, or is it strictly a process of denying the existing explanation? This is a classic debate strategy — criticize your opponent and never affirm what you believe in order to avoid criticism. But this stratagem is unacceptable in science. Big Bang skeptics, for example, ignore the convergence of evidence of this cosmological model, focus on the few flaws in the accepted model, and have yet to offer a viable cosmological alternative that carries a preponderance of evidence in favor of it.

9. If the claimant has proffered a new explanation, does it account for as many phenomena as the old explanation? The HIV-AIDS skeptics argue that lifestyle, not HIV, causes AIDS. Yet, to make this argument they must ignore the convergence of evidence in support of HIV as the causal vector in AIDS, and simultaneously ignore such blatant evidence as the significant correlation between the rise in AIDS among hemophiliacs shortly after HIV was inadvertently introduced into the blood supply. On top of this, their alternative theory does not explain nearly as much of the data as the HIV theory.

10. Do the claimants' personal beliefs and biases drive the conclusions, or vice versa? All scientists hold social, political, and ideological beliefs that could potentially slant their interpretations of the data, but how do those biases and beliefs affect their research? At some point, usually during the peer-review system, such biases and beliefs are rooted out, or the paper or book is rejected for publication. This is why one should not work in an intellectual vacuum. If you don't catch the biases in your research, someone else will.

There is no foolproof method of baloney detection, nor is there a definitive set of criteria we can apply in determining how open-minded we should be when encountering new claims and ideas, but with this analysis of the personality of open-mindedness and the list of questions to pose to make that determination, we have made a start to getting our minds around this knotty problem in critical thinking.

Notes

[1] Richard Feynman. Quoted in "The Best Mind Since Einstein." Nova. WGBH Boston. 1993.

[2] Stephen Wolfram, *A New Kind of Science*. Champaign, IL. Stephen Wolfram, LLC, 2002.

[3] James Carter, *The Other Theory of Physics: A Non-Field Unified Theory of Matter and Motion*. Enumclaw, WA: Absolute Motion Institution, 2002.

[4] Carl Sagan, quoted in Michael Shermer, *Why People Believe Weird Things*. New York: W. H. Freeman, 1997.

[5] William Broad, "Maybe We Are Alone in the Universe, After All," *New York Times*. February 8, 2000.

[6] David Swift, *SETI Pioneers: Scientists Talk About Their Search for Extraterrestrial Intelligence*. Tucson, AZ: University of Arizona Press, 1990.

[7] Michael Shermer, *The Borderlands of Science: Where Sense Meets Nonsense*. New York: Oxford University Press, 2001, pp. 229-232.

[8] Frank Sulloway, *Born to Rebel: Birth Order, Family Dynamics, and Creative Lives*. New York: Pantheon, 1996 p. 73.

[9] In Shermer, 2001, p. 231.

[10] Sulloway, 1996, p. 213.

[11] Keay Davidson, *Carl Sagan: A Life*. New York: Wiley, 1999. And William Poundstone, *Carl Sagan: A Life in the Cosmos*. New York: Henry Holt, 1999.

[12] Davidson, 1999, pp. 89-90

[13] Ibid., 90-91

[14] Thomas Kuhn, *The Essential Tension*. Chicago: University of Chicago Press, 1977.

[15] Michael Shermer, *How We Believe: The Search for God in an Age of Science*. New York: W. H. Freeman, 1999, p. 246.

[16] In Shermer, 2001, pp. 236-38.

[17] In Shermer, 2001, p. 116.

[18] Michael Shermer, "Fox's flapdoodle", *Scientific American*. June 2001, p. 16.

[19] Quoted in Michael Shermer, "I Was Wrong." *Scientific American*, October, 2002, p. 18. First Velikovsky quote from the journal *Pensée*, quoted in Henry Bauer, *Beyond Velikovsky: The History of a Controversy*. University of Illinois Press, 1984 p. 282. Second Velikovsky quote from Immanuel Velikovsky, "My Challenge to Conventional Views in Science," in *Velikovsky and Establishment Science*, Kronos Press, 1977 pp. 16-17.

[20] Sarich quote and attribution of "dedicated multiregionalist" is from *Science*, May 11, 2001, p. 1051.

[21] All quotes from Martin Gardner, *Fads and Fallacies in the Name of Science*. New York: Dover Books, 1957. A lengthy discussion of Gardner's book and work is in Shermer, 2001, pp. 50-65.

[22] Michael Shermer & Pat Linse, *The Baloney Detection Kit*. Altadena, CA: Millennium Press, 2000.

[23] Carl Sagan, *The Demon-Haunted World: Science as a Candle in the Dark*. New York: Random House, 1995.

[24] Daniel Kevles, *The Baltimore Case*. New York: W. W. Norton, 1998.

Open-Mindedness and Aesthetic Consciousness in Cross-Cultural Understanding

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Man's mind stretched to a new idea never goes back to its original dimension.
—Oliver Wendell Holmes

Introduction

In our time and in our nation, public education is in serious disarray. It is now a nationally observed phenomenon that despite good intentions on the part of teachers and administrators, many of our students seem culturally deprived. They exhibit a staggering ignorance of the cultural underpinnings which guide their lives and the lives of others. It is as if all that makes for understanding of "self" and "others" has disappeared, leaving only a more or less satisfactory standardized test as the approach to learning. Pedagogy is hapless and empty if it does not face directly the deep and pervasive dialectic between the historical and genetic conditioning of the person on the one hand and the impress of the novelties of the physical and social world on the other hand. This confrontation between our human heritage and the world in which we find ourselves, is the stuff out of which we weave that fragile creature we call the "self." The key to successful mapping of this conflictual terrain is the making of relations, that is, the forging of a distinctively personal presence in the doings and undergoings that constitute our experience. The making of relations is a life-long endeavor, but it is especially important in the lives of children, as they struggle to achieve self-consciousness in a vast, complex and initially undefined environment.

Helping our children to learn how to make relations is the central and most important task of pedagogy. To the extent that they do not learn to make their own relations, children's minds' will not be exposed to the ideas that will enable it to stretch beyond its original dimensions. They will be doomed to living secondhand lives, creatures of habituation, who merely follow out the already programmed versions of their experience as inherited from parents, older siblings, and self-appointed definers of reality, such as teachers. Just what is it for a child to make relations and why do I regard it as crucial to a humanistic pedagogy? As we come to self-consciousness in our early years, we are playing out our inherited genetic and social trappings. None of us can ignore the conditioning power of this inheritance. There is no self free of the entangling alliances of one's genetic and social past. To be born white or black, male or female, Italian or Irish, is to view oneself from an inherited context. To experience one's early years in an urban setting or a rural one, in a church a synagogue or a mosque, is an informing crucible that our consciousness can ignore but never totally dismiss.

My point here is that the only way to obviate the possible deleterious effects of our inherited trappings is to bring them to the fore and diagnose them as to their richness, their narrowness and the role they play in our assumptions. Under careful and probing guidance, even young children are capable of fleshing out their distinctive sense of time, space, place, size, color, tone, and ever more subtle ambiences of the world in which they find themselves. In this way, the inheritances are transformed from conceptual boxes in which the child is unknowingly encased, to perceptual fields, fit for romping and reconstructing in the light of present experiences. This is precisely what is meant by making of relations, namely, taking these inherited conditionings and turning them from conceptual rocks into something more transparent, crossed and recrossed with a diversity of images, attitudes, values, and styles. To have educational experiences without relations, especially of dissimilarity, is to be left with the inert, repetitious and routine.

The images, attitudes, values, and styles brought to experience reflect culture. By the application of their senses to actual situations, persons cultivate themselves by the formation of codes, laws, norms, and patterns of life suitable for their daily spatio-temporal existence. Persons are distinguished by their cultures. They become thus a unique and specific type. The differences in persons are summed up in their varying cultures and patterns of life. By their varying cultures, persons are polymorphic and polytypic; they differ from place to place. Culture is therefore a boundary marker, which not only establishes persons as more than mere animals amongst animals, but also sets groups apart

from one another. Such division has the capacity to tear persons into mere fragments and create insularity, which leads to feelings of cultural superiority. Racism, apartheid, ethnocentrism and other superiority claims arising from appreciation of one's own culture to the disdain of others creates barriers which impede communication and making relations among peoples.

This paper proposes to explore those issues central to cross-cultural understanding itself. Central to my thesis is that such understanding is a product of open-mindedness viewed as an aesthetic consciousness. What is here called *cross-cultural understanding* is itself a kind of understanding of relations — an understanding that draws on the relations between different disciplines in order to position the observer "to see" and thus be in a position "to understand" the world from the perspective of the other. In this seeing, however, my hope is that the concept of "other" dissolves, or at least recedes in significance, in the understanding. To engage the reality of the "other" requires that we see multiple aspects of that reality through the eyes of the "other" themselves — through the eyes of its philosophers, historians, writers, and artists — those who provide us with a critical perspective of the "others" lived experiences. Doing so requires a particular character, a dispositional quality. It is a disposition for what Langer calls *mindfulness* (Ritchart, 2002, p.40). Mindfulness, as Langer understands it, can be described as "an open and creative state in which individuals actively generate new categories, draw meaningful distinctions, consider multiple perspectives, and are open to new information" (p.40). Achieving such mindfulness requires one to be aware of and move beyond one's inherited trappings, preexisting categories, automatic responses to situations, and the personal perspective one brings to relations with the "other." Such mindfulness is counter to narrowness and rigidity, the acceptance of things as they come to us, allowing our minds to stay in a comfortable groove rather than challenging the way things have always appeared. For example, if you had asked someone at the beginning of the 20th century if philosophy was a suitable subject of study for the elementary school child, that person would most likely have said "no." Then, along came the Institute for the Advancement of Philosophy for Children with its successful elementary school curriculum and materials (see Lipman & Sharp, 1980). The developers of such a curriculum were able to open our view of children and their capacity for philosophical inquiry. As this example suggests, such open-mindedness is not about mere acceptance of new ideas or others' positions; it implies being flexible, willing to consider and try out new ideas, generating alternative options and explanations, and looking beyond the given and expected (Ritchhart, 2002, p.28).

Making Relations and Aesthetic Consciousness

A central aim of philosophy is to "see something as it is." If this is achieved, we have a reasonable benchmark for approaching another "thing as it is." This simple remark of Wittgenstein's embraces a most fundamental question within philosophy. "A whole cloud of philosophy condensed into a drop of grammar," he once said (1958, p.222e). The effort to see another's world "as it is," a particular aspect of another's culture for example, when one is alien to that culture, poses several difficulties. His remark, however, deflects us from thinking that philosophy is just a matter of one's own perspective, opinion, or point of view. The philosopher cannot say "every view has its charm." It is not that there are not different points of view. Rather the views we have are significant and meaningful in the manner we come to engage and express what *is* — the very existence of the world and our existence in it. If I come to a significant, that is, considered view of the world I inhabit, then I have a starting point for venturing to understand another's world. In this way there is the possibility of moving toward mutual understanding.

What was most important for Wittgenstein was his recommendation that we stop "thinking" and begin "looking". Through "looking" we shift the emphasis of our critical approach from a "ratio/technical," or "meta-theoretical " one to an "aesthetic' one; we extend our vision to overcome "aspect blindness" — an inability to see what is in front of our noses or hear what is clearly auditory. It is such seeing and hearing that bring the other's reality closer to us and allow it to penetrate how, in turn, we see, understand, and relate to our own world.

Armed with the above reminders I approach my task with the confidence of listening to and hearing the particulars in the current discussion of the problems and issues involved in cross-cultural understanding. The structure of my entering into this conversation is to discuss those issues related to the philosophical debates about "understanding another culture" and establishing a clear method as to what I take to be the proper approach to the problems in these debates. Here I rely heavily upon Wittgenstein and his approach to meaning and understanding as an *aesthetic enterprise*.

Winch comments on what he regards as "one of the most remarkable examples of one of Wittgenstein's most characteristic argumentative moves: a shift of attention away from the object to which a problematic concept is applied toward the person applying the concept" (1997, p.60).

> This practice of Wittgenstein's is not a meaningless tic, but is meant to emphasize that the sense of the concepts we deploy lies not just in the

> circumstances surrounding what we apply them to but also in the circumstances surrounding us, who so apply them. (p.62)

In his *Philosophical Investigations*, having challenged some conventional pictures of how language is said to have meaning, Wittgenstein offers as among the central features of meaning the view that words and grammar of a natural language are shared within a culture or form of life of a people; the meaning of concepts depends upon their being shared perceptions and customs among a community of language users. The shift from the object to which a concept is applied toward the person applying the concept is expressed through the following metaphor for thinking about the meaning of language:

> We want to say: 'When we mean something, it's like going up to someone, it's not having a dead picture (of any kind).' We go up to the thing we mean. . . Yes: meaning something is like going up to someone. (1958, pp.132-133)

The mutual understanding we would like to achieve in "going up to' another human being may be easily destroyed. If the other person is a stranger we may naturally turn away or talk or dwell only reticently in their company; we may fail to spend enough time or give enough attention to meet "face to face" or "eye to eye." "Going up to the thing we mean," involves *me* in the circumstances related to my approach to it. Lack of attention or interest in the "thing" — the other — Wittgenstein sees as a more important drawback in understanding the other than believing they have a different way of thinking or a different "rationality" from our own.

What we are asked to do is probe how we could contemplate the differences — "riddles," Wittgenstein calls them — we encounter in practices that seem alien to us so we would relate these differences with something familiar or that we did understand. The metaphor of "going up to someone" shifts the meaning paradigm from an epistemic mode to an aesthetic mode — a move, as he says, "from a dead picture" to "a living one." Meaning is connected more to our human perception and experience (including recognition, interests, and expectation) than with intellectual cognition and empirical fact.

To make this point even stronger, consider Reena Bernards' discussion of dialogue in building bridges between Christians and Jews:

> In the 1960s *dialogue* meant Jews and Christians studying together to understand the differences and similarities of their beliefs. It meant explaining to Christians that, in the eyes of Jews, Christianity did not supersede Judaism and that the religion of the Jews remains a unique and philosophically distinct monotheistic faith. It meant exploring

> with Christians the religious roots of anti-Semitism, helping them reexamine their contemporary texts to remove references to Jews as killers of Jesus or doomed souls because of a lack of belief in Christ. For Jews such as my father, dialogue was a natural response to living as a minority in a Christian-dominated society. It was a way to make oneself understood, and to help create a safer environment for other Jews. (2000, pp.191-192)

The focus of the dialogue, in Bernards' account, is not to offer causal and theoretical explanations but to "make oneself understood". Doing so requires that the "eye" be cast on the people's activity — on how they went up toward one another. It is not to seek some explanatory hypothesis that might appeal to the "intellectual eye" — to some bit of "scientific" rationality. As dialogue it is to be two-sided assuring ample attention is given to the voice of the other.

A major difficulty with rationalists' paradigms is that they function to make thinking easier in environments that require complexity; they shift the burden of the investigation onto an abstract level and away from the level where the ordinary human activity, with its language, stories, or ceremonial acts, is doing something, i.e. its job. The burden of understanding is shifted from ourselves onto a theory.

There is little doubt that Jews being seen by Christians as "killers of Christ" or "doomed souls" is a serious matter and strikes deep roots in Christians and Jews alike. Matters of life and death beckon to us and demand some understanding. Wittgenstein insists that what gives these matters depth is not to be found in explanation of their origin, but in how we relate them with our own thoughts and feelings.

> We also say of some people that they are transparent to us. It is, however, important as regards this observation that one human being can be a complete enigma to another. We learn this when we come into a strange country with entirely strange traditions; and what is more, even given a mastery of the country's language. We do not *understand* the people. (And not because of not knowing what they are saying to themselves). We cannot find our feet with them. (1958, p. 223e)

It is difficult to "find our feet" or "find ourselves" with those who engage in certain religious ceremonial acts. With these acts we have "come into a strange country." With some attention we can find out what they are saying and how their actions have meaning within their religious life. Yet, we still may not *understand* clearly. Wittgenstein sees this as the really crucial issue; one that cannot simply be left at an impasse with a culturally relativistic response to fix it in place. We cannot say "every view has its charm" and leave it at that! We must "find our feet" or "find ourselves in them" on the matter and thus move toward

a more comfortable (or disturbed) understanding. That is, we must hope to relate the practices of the other with ourselves. We do so by searching for analogies with practices of our own culture.

In "finding our feet" while confronted with the desire to gain an understanding of the culture of others, we must address the culture's structure of feeling. The structure of feeling is constituted by the lived experience of the people. Here the concern is with what human life is like as actually lived within the personal and social forms the culture generates. Those who live within the culture have an understanding of this that is difficult for the outsider to gain. But anyone within a culture lives a particular life-form and may be blind and closed-minded to what it is to live some of the other life-forms. How many corporate executives know what it is like to be a fifty-year old laborer whose factory has closed down? How many men know what it is like to live the life of a woman? How many women know what it is like to live the life of a man? How many Christians know what it is like to live the life of a Jew? How many Jews know what it is like to live the life of a Muslim? And so forth. We all tend to be foreigners to life-forms other than our own. And how many of us really know what it is to live our own life-form? How can we know without also knowing other possibilities? How much self-understanding do we have? How much are we capable of without understanding and making relations with others? What specific form of consciousness is required for making relations necessary for the understanding of others and the self?

An aesthetic consciousness as provided through the arts, especially the literary arts (poetry, the short story, drama, and the novel) present to us the feeling of life as lived within certain identities and forms and under certain circumstances. Great artists have to have a profound imagination together with understanding grounded in rich lived experience, and a talent for expression that enable them to know in some expressible form the realities of lived experience under the constraints of given personal characteristics, social forms, and circumstances. Without the works of artists, neither we nor the artists themselves would understand very deeply our experiences and what they reveal about our forms of self and society. Thus, Martha Nussbaum speaks of the process of "cultivating humanity" (1997). Those who cultivate humanity need, Nussbaum says, "the ability to see themselves not simply as citizens of some local region or group but also, and above all, as human beings bound to all other human beings by ties of recognition and concern" (p. 10). This involves the establishment of what Nussbaum calls the "narrative imagination". This means, she continues:

> the ability to think what it might be like to be in the shoes of a person different from oneself, to be an intelligent reader of that person's story,

> and to understand the emotions and wishes and desires that someone so placed might have. The narrative imagination is not uncritical, for we always bring ourselves and our judgements to the encounter with another; and when we identify with a character in a novel, or with a distant person whose life story we imagine, we inevitably will not merely identify; we will also judge that story in the light of our own goals and aspirations. But the first step of understanding the world from the point of view of the other is essential to any responsible judgement, since we do not know what we are judging until we see the meaning of an action as the person intends it, the meaning of a speech as it expresses something of importance in the context of that person's history and social world. . . . the ability to decipher such meanings through the use of the imagination. (p.11)

Maxine Greene challenges us to strengthen the expansion of community rather than its fragmentation (1997, p.511). Such expansion is to be accomplished, says Greene, through the passions. The central sphere for the operation of the passions is the "realm of face-to-face relationships" (p. 511). Greene continues:

> It seems clear that the more continuous and authentic personal encounters can be, the less likely it will be for categorizing and distancing to take place. People are less likely to be treated instrumentally, to be made 'other' by those around.

Thus, Greene speaks of concrete encounters with the "other." It is a contact designed to counter objectification. She speaks from the perspective of aesthetic consciousness. She explains the impact of such consciousness quoting Cynthia Ozick:

> Through metaphor, the past has the capacity to imagine us, and we it. Through metaphorical concentration, doctors can imagine what it is to be their patients. Those who have no pain can imagine those who suffer. Those at the center can imagine what it is to be outside. The strong can imagine the weak. Illuminated lives can imagine the dark. Poets in their twilight can imagine the borders of stellar fire. We strangers can imagine the familiar hearts of strangers. (p. 511)

Such an expanding of community will take shape, Greene believes, "when diverse people, speaking as *who* and not *what* they are, come together in speech and action" (p. 511).

All this is consistent with Wittgenstein's notion of "finding our feet" through "going up to someone." Artists push the social character of a culture against reality in lived experience in a way that makes an implicit judgement on it. They also explore and test other human possibilities. Aesthetic consciousness opens our minds to how we and others are constituted, how we and others live our lives and experience

the world, and what it would be like for human beings to constitute themselves and society and to live and experience the world in novel ways. Viewing the other aesthetically provides us with a great expressive, revelatory, and critical resource; it provides us with our primary access to the structure of feeling of the culture in which we live as well as with some understanding of what the structure of feeling of alternative cultures would be. It is through the aesthetic that structures of meaning, normativity, possibility, and necessity as they are encountered and manifested in lived experience are revealed. The art of a culture constitutes a great expressive, revelatory, and critical resource. Through a consciousness provided by it we are also provided with our primary access to the structure of feeling of the culture in which we live as well as with some understanding of what the structure of feeling of alternative cultures would be. Nussbaum reminds us that discerning structures of feeling through the use of the "narrative imagination" is inherently judgmental, for lived experience comes in positive, indifferent, or negative modes. We are concerned with the value tones of the deep and pervasive feelings of those who share a somewhat common identity and form of life.

From knowledge of such experiences, especially as they are expressed in the art of a culture, we gain some understanding of how the people's own lived experience judges their identity and forms of life and society. This is a judgement based on the reality encountered in lived experience over time; it is a judgment that we must take seriously in cultural criticism. It is an overall experiential judgment that can provide some measure of confirmation for the general orientation of the culture or it can indicate that something fundamental in the culture is wrong. The tone of life structured by a culture reveals whether the culture makes for human flourishing or whether it chokes or perverts human beings and thwarts human living. It provides an experiential judgment on the social character of the culture, or at least on some of the forms of life the culture and its social order generate. When the spirit and passion of life as lived within a culturally constituted form of life reveals that something is wrong in the culture, it may not be able to show what is wrong. If not, other methods of cultural criticism are called for. As Young Pai points out:

> All cultures do their job. However, from the fact that particular behaviors and belief patterns have been worked out by a given culture, we should not conclude that such patterns are necessarily the best possible ways of meeting the human needs in that society. Nor should we even insist that a particular practice, which has worked well in one cultural setting, will be equally effective in a different cultural setting.

> However, cultural patterns can be judged in terms of the effectiveness with which they enable the members of that society to deal with their problems. This implies that some cultures may be more efficient that others. Similarly, some cultures may be more maladative and self-defeating than others and those cultural practices which tend to be self-defeating need to be modified, abandoned or even prohibited. We should not consider the use of maladaptive and self-defeating patterns as merely a matter of applying different but equally valid cultural norms. (1993, p.4)

In approaching another's practice(s), critically or otherwise, we in turn find the room in ourselves to make relations, new aspects of the other's life with our own, and possible appropriations of the practice in our life. The understanding passes both ways in the seeing. Wittgenstein calls this a "perspicuous representation" (1958, 49e). For him such a "perspicuous representation is a way of seeing things — a way of setting out the whole field together by making easy the passage from one part of it to another. Relations between parts suddenly become transparent. His idea has an aesthetic tone of looking, of seeing things whole.

This is all related to what I think it means to approach the very nature of our attempt to understand others and ourselves from an aesthetic point of view. The very order of being in the world is like an intricate weave of perception and response, of reacting and embracing the world we see, and being open to and familiarizing ourselves with (or reading) the grammatical background found in the particular experiences of our life.

Educational Implications

This essay began with the claim that public education was in serious disarray and that students appeared culturally deprived. The cultural crisis, I argue, is mirrored, and in part caused, by the corresponding crisis in public education. Typically, students are given no coherent understanding of the world which grounds a moral identity, a sense of community, or provides them with any sense of direction or meaning.

The great theme which runs through the life work of the philosopher E. Maynard Adams is the conflict between *naturalistic* and *humanistic* interpretations of persons and the world, and it is this distinction which provides a handle on the cultural and educational crisis which served as the starting point of this essay.

Adams argues that Western Civilization experienced a revolution the most momentous in human history — between 1300 and 1700:

> The classical Greek, Hebraic, and Christian cultures were generated by

> man standing in the world asking primarily 'what does reality require of me? How can I fulfill these requirements? How can I become what I ought to be and do what I ought to do?'... Knowledge was conceived and developed in such a way that it would be useful in the human enterprise thus directed. The intellectual dimension of the culture was shaped largely by religious, moral, social, and political concerns . . . . The humanistic view of knowledge generated by the classical orientation of man toward the world presented semantically a rich, multidimensional world which engaged man in all areas of experience and thought and provided ontological grounding for the various sectors of culture and support for the existing social order. (1975, pp. 48-49)

The classical world was grounded in the primacy of our distinctively human needs. Knowledge was conceived in such a way as to give form, direction, and meaning to such needs. But we also have materialistic needs for food and shelter and creature comforts, but classical culture subordinated them to our humanistic needs; Adams believes it is the reversal of this priority which accounts for the development of the modern worldview:

> The culture-generating stance of Western man shifted between the thirteenth and seventeenth centuries to that of man standing before the world asking, 'How can I get what I want? How can I impose my will upon the world? How can I manipulate, control, and exploit it for my own purposes?'... The new situation gave rise to fresh ways of looking at things and to a kind of knowledge that is power, that is know-how, in the manipulation and control of things. It was thus that modern science was born. . . .Within the scientific approach, we count as relevant and genuine only such knowledge as would at least in principle be useful in making, manipulating, and controlling things. The correlative of this is that we count as real only that which we would have to take account of and deal with in controlling and manipulating changes in the world. (p. 49)

Modern science and technology re-formed and re-formulated our approach to the world in ways that would have us conceive it in a manner that reduces the morally thick social space and time into a morally neutral physical space and time. But persons, culture, and history cannot be understood in terms of the categories of modern science, and the fundamental error of much social science — indeed, of much scholarship within the humanities is an uncritical emulation of the methods of the natural sciences. Adams writes:

> It is urgent for the humanities to reassert themselves in their own authentic, indigenous categories and to reclaim their rightful place as man's natural and most comprehensive approach to reality which defines for him both his self-image and his world view; for in no other

> way will we be able to correct the derangement of our modern Western culture, overcome our ontological and social alienation, and salvage the world as a place that will support and nurture the human spirit . . .The humanistic perspective is constituted by man's total experiential encounter and active engagement with reality. It is from within this orientation that one becomes aware of oneself as a Being in the world and becomes a functioning person. (p.207)

Persons are not isolated, self-interested social atoms, but social beings embedded in a social space crisscrossed by cultural webs of meaning and value. We are, as Adams likes to put it, "culturally generated"; there would be no "I" without a "we" (1975, p. 40). Our identities are established — though never fixed — by our situatedness in a historical community, in a narrative, a story. We cannot understand ourselves, our relationships, the various emotional, cognitive, and moral pulls which we feel, apart from understanding our tradition. We have identities as parents and children, as citizens, as friends, as students or teachers. Some identities are taken on; some are not; but all are defined within a cultural tradition.

The humanities — and humanistic education — initiate us into a culture, into historical communities and traditions. We come, through education, to feel and believe and hope in terms of the various historical communities we discover ourselves to be a part of; in the process, our identities are formed, broadened, and deepened. When we come to understand ourselves as part of a historical community, from within, as it were, rather than as social atoms buffeted by social forces external to us, we then share in a sense of community with that larger culture.

Because the humanities take the whole of life as their domain, it is vital that they reveal (and, as I have argued, critically assess) what has been referred to as the "structure of feeling" or the lived experience of a people within a culture; it is not enough to have propositional knowledge, we must have an imaginative "feel" of life within a culture. Thus, to use the old cliché': art (or at least good art) doesn't just tell us about the world, it shows us that world, and it recreates that world for us. So we are again admonished by Wittgenstein to stop "thinking" and begin "looking". Adams asserts:

> Education concerns not only how to think about things, but more fundamentally how to experience them [or how to feel about them]. This is true even for sensory perception. In teaching a child a language, we teach him how to perceive the world about him. We teach him to take note of those sensory features of things that have been found to be important for human purposes and ignore other features he might be capable of discriminating. In teaching objectivity in experience and

> observation, under our modern view of objectivity, we encourage people to bracket, to suspend, to suppress their feelings and emotions. We teach that they have no place in discovery or data-gathering. (1968, p. 391)

Thus, we must be reminded to avoid what Whitehead called "the fallacy of misplaced correctness," which is the error of thinking that the vocabulary of science is in closer touch with reality than the vocabulary of poetry. A world infused with technology and science will need all the more the wisdom of the humanities. It will need the aesthetic consciousness generated through the humanities to reinterpret human history and human experience in light of the new science and against the background of the classical wisdom Adams reminds us of.

Conclusion

The next century will see an ever-greater explosion of knowledge than we are seeing now. Its forces could pull us even farther from the search for a common ground on which we can communicate with others different from ourselves, and worse still, its forces could pull us apart from within, dismantling our understanding of ourselves. To guard against the potentially destructive character of technological change, we must re-fasten our souls to the post of aesthetic understanding and wisdom that education alone can provide.

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Open-Mindedness and Media Bias:
Education for Insight

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> Serious efforts to change a situation for the better presuppose that we understand what the present situation is. If children are to grow up into adults capable of challenging bias, they need to become acquainted with the forms bias takes in society.
>
> —*William Hare, 1993, 72*

> To the fish, the water is invisible.
>
> —*Ghanian proverb in McLuhan, 1969, 63*

As parents and concerned citizens we worry for fear children become slaves of the unscrupulous; that, instead of becoming astute readers of their cultural context and its impingement upon their quality of life and the common good, they become ensnared. It is an assumption of this paper that part of this slavery is a failure to recognise the meaningful difference between the 'what' and the 'how' of external stimuli and how the 'how' biases the 'what.' In information media in particular, the focus on what is being communicated tends to make us blind to *how* the what is being communicated.

Agents communicate via means of expression. It is not only *what I say* but *how I say it* that contributes to the overall effect as I communicate. To decide regarding the reliability of what I say requires a consideration of all the means by which I express myself. In face-to-face communication one takes into account bodily gesture, tone of voice, eye contact and environmental factors such as the distracting noise in the next room. To decide regarding reliability when one is communicating

electronically means not only that one communicates at a distance, but also it means that layer upon layer of different forms of representation are involved, each of which deserves consideration *vis à vis* its characteristics and their potential to colour meaning. Each form of representation can be treated as a medium itself, with its own particular leanings or tendencies. By considering how a medium creates its effects, we consider its characteristic tendencies or biases; for example, facial expression is lost to radio and e-mail but is a critical part of mime.[1]

The artist is one who develops a facility with his or her medium and knows how to use its tendencies to good effect. For example, the texture of oil paint can be used to help create shading as well as to give the illusion of depth. The striking comparison of a good metaphor can spice up an essay. It is the responsibility of arts education, by its very definition, to teach bias recognition. In teaching artistic technique, we teach the characteristics of the medium in which we are working so that students learn to use these characteristics to good effect in their own performances. To use them to good effect means to engage with the materials of a medium; e.g., the thick viscosity of oil paint, the plumb tones of a bassoon or the rich dialect of a particular character.

It is the purpose of this paper to consider concepts and strategies for the study of media bias in light of the ideal of open-mindedness. As William Hare explains, "[o]pen-mindedness exists when we are willing to have our views influenced by evidence and argument" (1993, 81). What bias does, as Hare points out, is interfere with evidence and argument and thus undermine teaching and education (78). I see the study of media bias as part of a formalist curriculum in the arts; that is, one of engagement with whatever form comes along, not one of strict adherence to a particular form. When I call my curriculum, or its focus, 'formalist' I am imagining students engaging with materials in a studio practice. Their practice need not create products of a concentrated quality like those of professional artists or those training to become professional artists. Technical expertise may develop from a formalist arts curriculum, but as a by-product. The main purpose of the formal engagement is to provoke insight or pattern recognition. Engaging in the creation of formal arrangements gives students an opportunity to learn how to work out problems as they arise. Dearden describes discovery as a process that "leaves the result of the learner's activity open in some important respect, so that what is to be learned has indeed to be found out" (Dearden, 1976, 154). Familiarity with a medium comes from pushing its limits as one tries to make it say what one wants to say. Following the materials where they lead is the formalist version of Socrates' injunction to follow the argument where it leads. In an argument, the materials are ideas.

Recognising significant patterns is what McLuhan enjoined us to do. As he pointed out, the shift from an oral to a written culture meant that "classified wisdom took over from the operational wisdom of Homer and Hesiod" (McLuhan, 1964, viii). Now that computers out-perform humans at inputting, retrieving and re-organising data, education by classified data is redundant. McLuhan warned that: "[a]s the means of input increase, so does the need for insight or pattern recognition" (24).

Part of teaching students to be critical observers of the human condition is helping them to recognize bias. In the language arts classroom we consider the leanings and tendencies of language and literature. We teach the techniques required to create a certain tone or point of view in a piece of writing. The study and practice of formal compositional elements help students see how a particular set of impressions and effects is created with language. It is our hope that developing an ability to see through the final effect of a piece to its constituent technical choices will prepare students for recognizing propaganda when they encounter it.

Herbert Gans calls for literary critics (and, I would add, teachers in all the arts) to concentrate their textual analytical skills not only on literary (and other artistic) texts but on the mass-mediated products that shape our view of the world; namely, news reports.

> I wish that literary analysts, particularly, would apply their insights and methods to news stories that reach tens of millions of people, and devote less effort to the works of "serious" minor writers of the past. (1980, 7)

What I suggest in this paper is that, in addition to applying our textual analytical skills to the mass-media genre of news, we be daring enough to engage in formal operations upon news texts. To do so, we can follow the processes of invention used by artists.

It is as part of education for insight or pattern recognition that I consider the following concepts and strategies for recognising media bias. Because a pattern can be a means of expression it can be called a medium. Pattern recognition is therefore synonymous with bias recognition. To see inside [in-side, in-site, in-sight] the workings of a formal system to its characteristics is to gain insight or recognize its pattern/bias.

In the next section, I lay conceptual groundwork for a consideration of media bias. I then offer two exemplary examples; they are art-works that foreground media conventions. Next is a consideration of framing as a technique in the defamiliarisation of media bias. I conclude with the story of my own exemplary example.

Conceptual Framework

In everyday speech, when we speak of media bias, we tend to refer to the bias of an unbalanced report; one that ignores or gives scant or inaccurate coverage to a view of a story or issue. Critics, artists and scholars study media and communications, using countless tools and methodologies, to assess the legitimacy of media products. Journalists scrutinize news copy for balanced reporting. As the content of any op-ed page or talk-back tape attests, audience are also active critics. Sociologists measure selection strategies resulting from news agencies' policies and practices (e.g., Gans, 1980). This helps us see systemic bias, such as the fact that fewer news desks in Africa means scant representation of African issues on today's so-called 'global' networks.

There is, however, a broader definition of 'bias' than that of common usage.

> **bias**: [f. F *biais* f. LL *bifax* looking two ways f. *bi* + L *facies* face] **1.** *n.* predisposition or prejudice (*have a bias towards*): distortion of statistical result by neglected factor; (in bowls) oblique course of bowl due to its lopsided form, this form; oblique direction in cutting cloth. **2.** *v.t.* (*past and p.p.* **biased**) give a bias to; prejudice. **3. bias binding** strip of material cut diagonally, used to bind edges; **on the bias** obliquely, diagonally.
>
> 1570: "As you have sett youre bias, so runneth youre bowle" [OED].

In the game of bowls, the balls, called 'bowls,' are elliptical in shape as if two mixing bowls were joined together at their rims. The circumference along this rim is the 'bias.' In order for the bowl to roll it must balance and roll on the bias. One can see how the word evolved etymologically; the two 'faces' of the bowl are its elliptical sides. Skill in the game requires that one roll the bowl on its bias. If not, it will fall over onto one of its sides or 'faces' and stop. The fact that the bowl has a bias means that it can be thrown so as to follow a curved course.

The bias of a piece of cloth is an imaginary diagonal line joining its opposite corners. The bias forms a 45-degree line across the right angles formed by the warp and weft from which the cloth has been woven. Pulling along all the warp or weft threads puts the fabric at risk of tearing because the force is against only the threads going one way. Pulling along the bias collapses the oppositional relationship of up-down versus side-to-side. The squares become diamonds bringing the opposites parallel to one another. Fabric cannot be torn along the bias because one is working against all the threads and their intersections simultaneously.

The bias of the bowl and the bias of the cloth are inevitable in the

joining of materials to create these forms. Part of the skill in bowls would, I imagine, lie in learning to 'play the bias' to get just the right curve on the bowl while balancing on its bias. A piece of cloth is strongest along its bias. What is the significance of this denotation of 'bias' in relation to media? The intrinsic qualities and characteristics of a medium, be it a particular news genre (e.g., news brief, headline, on-the-spot interview) or one of its components such as its accompanying photographic imagery, still constitute its bias in the root sense of the word. It is this sense of 'bias' that is of particular interest to those who are designing arts curricula. We want students to appreciate the qualities and characteristics that comprise the bias of a particular medium. We teach students to analyse these qualities and characteristics and to use them with purpose to create a range of effects.

It is this sense of 'bias' referred to by Marshall McLuhan in his famous phrase "the medium is the message" and by Harold Innis in *The Bias of Communication*. McLuhan's distinctions in his use of the terms 'medium,' 'message' and 'content' are helpful to any study of media bias. He defines 'medium' as any extension of ourselves. This follows a root sense of the word.

> **medium**: (*pl.* **media** or **~s)** & a. [L, = middle, neut. (as n.) of *medius* middle] **1.***n.* middle quality, degree, etc., (*between* extremes, or abs.); HAPPY *medium*. **2.** intervening substance through which impressions are conveyed to the senses etc., e.g., air; (fig.) environment, conditions of life. **3.** agency, means, (*by* or *through the medium of*); **~medium of circulation**, what serves as instrument of commercial transactions, e.g. coin. **4.** liquid, e.g. oil, water, with which pigments are mixed for use in painting. **5.** (*pl.* **~s**). person claiming to have communication with the spirits of the dead etc. and reveal its results to others; hence ~ISM (3) *n.*, **~istic** *a.* **6.** means by which something is communicated; material or form usede by artist, musical composer, etc.; (in *pl.*, or erron. as *sing.*) = MASS *media*. **7.** *a.* intermediate between two degrees or amounts, average, moderate; **~bowler**, **~pace**, (Cricket, neither fast nor slow); *medium* TERM, **~wave**, radio wave having wavelengths between 100 and 1,000 metres [OED].

McLuhan maintained that each medium has personal and social consequences which result from the new scale which it introduces into our affairs. "[T]he 'message' of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs" (McLuhan, 1964, 24). McLuhan's phrase, "the medium is the message", carries an injunction that we not remain blinded by the 'content' of a medium.

> "the medium is the message" because it is the medium that shapes and controls the scale and form of human association and action. ... The

> content or uses of such media are as diverse as they are ineffectual in shaping the form of human association. (Ibid)

McLuhan recognized that we have traditionally been too aware of content, so much so that we have been blind to media effects. As he says, "the 'content' of a medium is like the juicy piece of meat carried by the burglar to distract the watchdog of the mind" (Stearn, 198). To make his point, McLuhan uses the electric light as an example of a communication medium.

> The electric light escapes attention as a communication medium just because it has no 'content'. And this makes it an invaluable instance of how people fail to study media at all. (McLuhan, 24)

The electric light is a medium of communication because in its effects upon human affairs, it eliminates "time and space factors in human association exactly as do radio, telegraph, telephone, and TV..." (25). It is the 'message' of a given medium which is paradoxically the most influential and the most difficult to recognize.

McLuhan's formulation, "the medium is the message", interrupted the common understanding of the phrase 'mass-mediated message' by making an idiosyncratic distinction between 'message' and 'content.' Using the term 'message' as McLuhan does evokes ambiguity and confusion thus serving to shake common usage.[2] For the sake of theorizing a basis for the study of media bias, however, I suggest adopting another term, one used by McLuhan's predecessor, Harold Innis.

McLuhan's 'message' is what Innis called the 'bias' of a medium. In his study of media effects McLuhan was following the ideas of Harold Innis, developed in the early 1950's in *The Bias of Communication*.[3] In his early work on the fur trade in Canada, Innis studied the habits and habitat of the most prized fur-bearing animal, the beaver, and showed how the characteristics of the communications that developed in that context were affected by the trapping and trade routes and practices that followed the habits of this amphibious rodent (Innis, 1930). The characteristics of the medium of communication he calls its bias. The bias is an integral part of any medium just as it is integral to the bowl in the game for which the term was first coined.

> A medium of communication has an important influence on the dissemination of knowledge over space and over time and it becomes necessary to study its characteristics in order to appraise its influence in its cultural setting. (Innis, 1951, 33)

In his introduction to the 1971 reprinting of Innis' *The Bias of Communication*, McLuhan says that

> Innis taught us how to use the bias of culture and communication as an instrument of research. By directing attention to the bias or distorting power of the dominant imagery and technology of any culture, he showed us how to understand culture. (xi)

Innis tells us that this book as well as his earlier *Empire and Communications* (Oxford, 1950) consist of reflections stimulated by consideration of a favourite essay question set by McMaster University Professor of Philosophy, James Ten Broeke: "Why do we attend to the things to which we attend?" This question leads one to ask how things attract and occupy our attention and this, in turn, leads to an examination of the characteristics or bias of that which attracts us.

McLuhan was impressed by Innis' method and describes how Innis changed his procedure after the fur trade study, trying to "interlace or link complex events in a way that reveals the causal processes of change" (Innis, 1951, viii).

> He changed his procedure from working with a "point of view" to that of the generating of insights by the method of "interface," as it is named in chemistry. "Interface" refers to the interaction of substances in a kind of mutual irritation. In art and poetry this is precisely the technique of "symbolism" (Greek "symballein" – to throw together) with its paratactic procedure of juxtaposing without connectives. ... This interplay of aspects can generate insights or discovery. By contrast, a point of view is merely a way of *looking at* something. But an insight is the sudden awareness of a complex process of interaction. An insight is a contact with the life of forms. (Ibid)

McLuhan describes the way symbolism works as a "paratactic procedure." 'Parataxis' is a grammatical term (like 'syntax,' 'syntactic') referring, according to the OED, to the "placing of clauses etc. one after another, without words to indicate co-ordination or subordination, as *Tell me, how are you?* [f. Gk PARA (*taxis* arrangement f. *tasso* arrange]." This implies an opening of the form; its usual connectives are missing and one is left to rely on inference, context and prior knowledge. Let us use the common metaphor, *life is a beach*, as an example. The tenor (e.g., *life*) of the metaphor is wrenched from its usual set of connotations by being brought up against the vehicle (is a *beach*). This provokes one to make new sets of correspondences within this new frame of reference (an *idea* is a *grain of sand*).[4]

The term 'interface' is so heavily employed today in communication and computer jargon that we should choose another term for this process if we are to make it a mainstay of education for insight. Luckily, there is one available and, whereas McLuhan used a term from chemistry, it is from literary criticism. In "Art as a Device," Viktor Shklovskij differen-

tiates the poetic use of metaphor from the practical. The poetic use is distinguished by a "peculiar semantic shift" which occurs in the act of transferring the object depicted to a different plane of reality (Shklovskij, 1917, 112). That which was familiar is 'made strange.' It is presented in such a way that it is seen as if for the first time. Shklovskij coined the Russian term *ostranyennia* - act or process of making strange, which is also translated as 'defamiliarisation.'[5] Shklovskij writes: "Thus in order to restore to us the perception of life, to make a stone stony, there exists that which we call art." The poet's "twisted, deliberately impeded form" places obstacles between the perceiver and the thing perceived (105). And, as Viktor Erlich puts it, "the chain of habitual associations and of automatic responses is broken: thus we become able to *see* things instead of merely *recognizing* them" (Erlich, 1981, 76).

McLuhan was impressed by the artistry of Innis' methodology.

> Without having studied modern art and poetry, he yet discovered how to arrange his insights in patterns that nearly resemble the art forms of our time. Innis presents his insights in a mosaic structure of seemingly unrelated and disproportioned sentences and aphorisms .... He expects the reader to make discovery after discovery that he himself had missed. (Innis, 1951, vii)

When one stops to think about it, it is not surprising that Innis' methodology resembles art; it defamiliarises as art does. It is possible that, in comparing Innis's work to "art forms of our time," McLuhan was referring to conceptual art, which was coming to the fore at that time and which challenged the defining line between art and philosophy.[6]

Gregory Ulmer makes a related claim: that in his readings of art texts, Jacques Derrida "mimes" their formal operations. These are the works of Derrida (e.g., *Glas*, *La carte postale* and *La vérité en peinture*) that tend to be ignored by other commentators because they are not deconstructions. Derrida *deconstructs* philosophical texts but *mimes* literary or artistic texts. "Literary or plastic texts ... are not analyzed but are adopted as models or tutors to be imitated, as generative forms for the production of another text" (Ulmer, 1992, xi).[7]

The pedagogical value of using interface as a working method in the classroom is, as McLuhan says, that of generating insight or discovery, the very goal of education he espouses in the wake of education by classified data. How might we design curriculum with this goal in mind? McLuhan made Innis' procedure his own as manifest most clearly in *The Medium is the Massage* (1967), a book comprised largely of visual imagery and written in collaboration with the artist Quentin Fiore. Andrew Forge uses an analogy from art to describe the kind of looking McLuhan's work provokes.

> If you put a landscape painting beside a figure sculpture, the really meaningful difference between the two is that one is a painting and the other is a sculpture — not that one is a landscape and the other a figure. . . . it seems to me that essentially this is ... the kind of way of looking at things, that McLuhan is inviting us to extend throughout our physical and intellectual life. (Stearn, 1969, 235)

This "kind of way of looking at things" which highlights meaningful differences is essential if one is to *see*, rather than merely *recognize* media. When the landscape painting and the figure sculpture are juxtaposed, each appears incongruous with the other; their contents can neither be compared nor contrasted since a more meaningful difference — in their media of expression — is made plain by the strangeness of their juxtaposition.

Strategies for foregrounding meaningful differences are described and categorised in *City as Classroom* by Marshall McLuhan (1977), Kathryn Hutchon, and Eric McLuhan. This is still an excellent source of exercises and experiments for the study of media. It offers a programme for systematically defamiliarising a medium to see it anew by training perception through the use of figure/ground analysis. To demonstrate figure/ground analysis, the authors use visual images which have two interpretations depending upon what the viewer sees as background and what he or she sees as figure in front of this background. An image commonly used to demonstrate the figure/ground relationship is that of a vase whose outer contours can also be read as the profiles of two faces looking at each other.[8] As one sees the faces as the figures of the image, the vase recedes to form the ground, and as one sees the vase as figure, the faces recede to form the ground. The authors point out that because figure and ground share an outline, they create and define each other (10). As we see one set of figures then the other, we are shifting frames of reference. The figure/ground distinction is then used to analyse situations other than visual experience; for example, there are suggestions for experiments with tape recordings which help students understand how sound is usually ground for sighted persons but figure for someone who is blind. There are suggestions for unusual reversals of the figure/ground relationship of a situation in order to perceive its structure more clearly. Stereotype is defined as a figure which has been repeated so often in a culture that it becomes part of the ground and is no longer noticed.

Thus far I have tried to set a framework for understanding how each medium has a bias and how we can bring bias to the foreground by defamiliarising one frame of reference in contrast with another. In addition we have seen that certain theorists adopt procedures that mime the workings of art. It remains to look at exemplary examples and see if there are classroom strategies to be gleaned or mimed from them.

Exemplary Examples

> You weren't supposed to ooh and ah any more. You were simply supposed to think. Critically.
>
> —*Ian Wiseman, 1991, 62*

Garry Neill Kennedy, former president of the Nova Scotia College of Art and Design, is a conceptual artist, the type who challenges an audience to think critically. His 1982 exhibition, *Special Presentation*, at the Dalhousie University Art Gallery consisted of photographs of presentation handshakes, clipped from Halifax newspapers, *The Chronicle-Herald* and *The Mail Star*, over a period of six months. He mounted and hung over 200 of them at handshake level. Each week he designed a new ad for the show using a different handshake, text, and border. Kennedy explains his concept:

> I used the strategies of art, the framework of art, the authority of art, to deconstruct the newspaper. I used seriality, process, the look of frames and borders. And it was live. It was in their own paper — and it ran for free. (Wiseman, 1991, 65)

What would be the effect on a visitor to such an exhibition? Just thinking about what it would be like to see these 200 small clippings lined up at handshake level affects one's concept of a newspaper. Everything but handshakes recedes, and one sees that photographs of presentation handshakes form a serial pattern in these newspapers. A convention of newspaper production is strikingly revealed and one begins to ask questions about what had been taken for granted.

Kennedy's *Special Presentation* is what I call an "exemplary example," following the usage of Gregory Ulmer (1985, 218); that is, it is an example that shows "how any example whatsoever functions" in a pedagogy for bias recognition using McLuhan's and Innis's definition of bias and medium.[9] It provokes a recognition of media bias and can be used as an exemplar for imitation in its formal operations or, to use Ulmer's phraseology, it is a "generative form for the production of another text" (1985, xi). Its formal strategies can be applied in other contexts and/or with other media.

Special Presentation inspires one to wonder about other media conventions that are so ingrained they escape our notice; for example, the bracketing role of news-readers' salutations on radio and television news broadcasts. In a media workshop, a small group interested in examining the styles and effects of this convention might create a collage of audio and video-taped salutations from a wide variety of programmes.

Or, possibly, the salutations could be transcribed and presented by students in live performance. In these ways, a teacher would be encouraging students to engage with the generative form by producing another text. To do so teaches pattern recognition.

As teachers we are always reframing things for students. Reframing is, in a sense, what education is all about.

> That bunch of squiggles are 'letters' that make up a 'word.'
> The rainbow over the playground is light 'refracting' through water.
> Speaking out is an 'inalienable right.'
> You call that 'finished'?! It won't get a passing grade.

Teaching involves getting people to see things in ways that are new to them. Sometimes it's a shock to learn something new; sometimes not. It seems to me that the teacher should also be discovering new ways of looking at things, shocking as it can sometimes be. What better way than through miming art-works with young people.

Nancy Chunn's *Front Pages* offers another exemplary example for designing a media bias curriculum. Every day of 1996 Chunn, helped by her partner and her assistant, prepared the front page of *The New York Times* to be a painting surface that could be preserved. It took an hour to bathe the acid from the paper and 48 hours to dry the fragile medium after which Chunn would apply her own words and images by using rubber stamps and pastels. With a sense that people should do work that is connected to their own lives, Chunn took on this project connected as it is to her life as a self-described "news freak" (Indiana, 1997, 5). The further she got into the project, the more involved her responses became.

> The more I did it, the more angry or involved I was getting, the more I started giving myself permission to talk. This is what I was doing, I was talking back to power. So it was a cathartic thing, here I am screaming or at least getting my two cents in, to the power, the power represented by the *New York Times* or what's in the *New York Times*. It was a very liberating experience. It was like activism, in a way — the more you get involved, the more things mean something to you. (7)

Choosing one page at random from the book that accompanied the *Front Pages* exhibition, I pick June 21st. The central above-the-fold photo is of Richard Nixon and Bob Dole from 1971. The headline reads: "For Dole, Nixon Was a Mirror and a Mentor." Chunn has reconfigured the mens' bodies so that they appear to be Siamese twins. Over the text of the story is stamped: "JOINED AT THE HIP." On a story about the merger of the "two radio giants," Westinghouse and Infinity, Chunn has stamped "Another Machiavellian Financial Maneuver" and drawn an octopus with tentacles extended. News of Boris Yeltsin's pre-election

dismissal of three top hard-liners is over-scored by the image of a beer can with the name 'Boris' and Yeltsin's face in the middle of the label. Stamped above it is the text: "NEW LITE AND IMPROVED."

Chunn certainly is "talking back to power" and I have described only three of her eight textual interventions on this page. There are 366 front pages in all, some of astounding beauty, such as the treatment of a photo on Feb. 23rd of Bosnian Serb refugees fleeing from the imminent threat of Muslim reprisals. Chunn has layered the pastels onto the photograph without losing its details. Along the roadway she has inserted tiny images of dogs, presumably the dogs of war, and above, the text: "ON THE ROAD AGAIN". Chunn says that "people recognize themselves in this process". We all talk back to power as we read, watch or listen to the news.

Making painterly interventions in newspaper and magazine text is something easily managed in the classroom. Students could be challenged to create their own language and imagery for talking back to news. The strategy could be applied to radio and/or television by recording a news report and re-recording it in a setting with students' own sound effects and/or dramatizations as talk-back. In order to make interesting interventions, students would have to be familiar with the context of a story and devise ways of representing comments according to a developing set of categories. By defamiliarising the newspaper convention they would *see* its effects.

Frames and Media Bias

In a recent article (2002) in an issue of the *Journal of Philosophy of Education* dedicated to *Bildung*, the term Adorno (1962) used to refer to education for humanity, René Arcilla warns of claims that the new digital technology possesses or provides an increased immediacy. He is asking if the postmodernisation of universities *vis à vis* communications technology is a move away from liberal learning towards inauthentic communication. Arcilla believes that one of the principal interests lending legitimacy to the development of mass-media technology in universities is "distance-spanning, communicative and representational immediacy" (457). He contends that the apparent immediacy of this medium is only an illusion and that it "requires that the medium recede from view"(457). He considers that blindness to the new mass-medium seriously limits the liberal learner's "capacity for radical self-examination." Arcilla suggests that a more critical attitude toward learning media can be found in the modernist arts. To explain the nature of this condition whereby immediacy depends upon the medium being hidden from view Arcilla draws on critic Clement Greenberg's definition of

'kitsch'. Kitsch depends upon the viewer being "mesmerized" by a work's lifelikeness and for this to happen the medium must recede from view.

> . . . instead of challenging individuals to look at, and think about, the work's actual elements and their workings, the hidden medium focuses our attention instead on an external world that is already completely recognizable, and so which evidently requires no further examination. (462)

Arcilla issues the same warning as Innis and McLuhan: look to the invisible frame that both joins and separates.

In *Objectivity and the News,* Dan Schiller proposes that there is a commonplace assumption about news-making which he calls an invisible frame. This is the assumption that there exists something called journalistic objectivity. He traces the emergence of this assumption through the rise of commercial journalism, showing how the assumption was encouraged by a growing reverence for 'the facts' as arrived at through the methods of pure empiricism, and by a popular belief in the ability of photography to capture visual truth.

> Journalistic objectivity presumed a world prior to all imposed values, and the periodic construction of accurate and universally recognizable copies of events in this world became the newspaper's fundamental business. (Schiller, 1981, 87)

Schiller considers the news to be a complex social construction. He quotes Helen Hughes's insight that the news "depends upon the point of view of the reporter who writes it, and the reporter's point of view emanates from the job itself, from the nature of the assignment, and from the character of his newspaper" (1). But, says Schiller, this complex structure is masked by the myth of objectivity. "Invoked conventionally, objectivity ostensibly precludes the very presence of conventions and thus masks the patterned structure of news: it is an invisible frame" (2). The bias of Schiller's invisible frame — the belief that news is accurate and universally recognizable copies of events in the world — blinds us to the very existence of news frames and, as a consequence, to the inherent biases of these frames. Schiller explains it this way:

> Objectivity facilitates the otherwise difficult belief that the newspaper "mirrors" or "reflects" reality. On the other hand, the claim to objectivity also enables the practices of news-story selection, treatment, context, and display to become a largely implicit foundation for the interpretation of public events. (Ibid)

Schiller attempts to de-mythologize news production by questioning the obviousness of the belief that news gives a 'real' picture of events. He

makes plain a powerful frame within which news-making takes place. When we see that journalistic objectivity is a myth, we stop measuring the distance between reality and the ideal of objectively reproducing it to which we assume news-makers aspire or ought to aspire. We can then focus our attention upon the practices and conventions of news-making. In these practices and conventions lie the inherent biases affecting what is presented as news and what is taken to be the real world.

In order for students to begin the examination of news as a mass-media genre it is helpful if they can conceptualise the many frames of reference impinging biases on the news report. Figure 1 may help.

It pictures the framings of a radio news report. In the centre of figure 1 is the news event. The first framing of the event is a combination of the reporter's text and any event-excerpts such as sound effects or live comments from news figures which may be mixed together with the reporter's text. The second framing is a combination of the news-reader's presentation style together with the news-writer's style as evidenced in the news-script which introduces the on-location report. In the first two framings, the frames are represented as interlocking because the effects of a single frame are often difficult to isolate; for example, the reporter's text may be mixed together with on-location sound effects, giving the impression that he or she is actually reading the text at the site of the event. Similarly, the news-reader's intoning of the news-writer's script may give it implications which were not written in.

The next frame is the news programme format which imposes on the

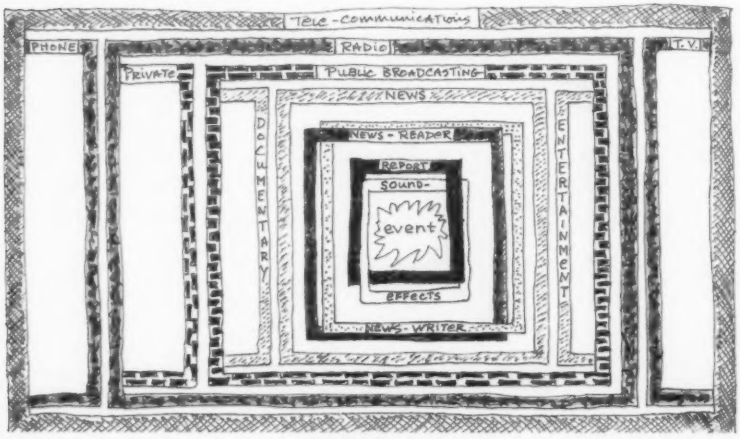

Figure 1

event such things as signature music, and salutations from news-reader to news-reader, from news-reader to audience, and from news-reader to reporter. The news programme format contrasts noticeably with an entertainment format like that of CBC Radio Two's *Music for Awhile*; whereas, the contrast with feature documentaries on a news programme like CBC Radio One's *Sunday Morning* is not as great.

The next frame is that of public broadcasting. With hourly news updates throughout the day and across five time zones, CBC Radio's editors produce hundreds of news broadcasts a week. This contrasts markedly with the private radio station which plays to a more localized audience and tends to fashion its programming to suit a specific age-group.

The radio frame imposes a particular stamp upon an event, which is different from that imposed by another electronic medium. Hearing about an event over the radio is decidedly different from hearing about it over the telephone. Radio is a mass medium, obviously less personal than a telephone. However, in comparing the medium of radio with that of television, McLuhan called radio hot and television cool. Presumably, this is because of the immediacy of radio's perspective; the listener can imagine him or herself in any one of many positions in relation to the action. The television camera fixes the viewer's position in relation to the action.

The outermost frame of figure 1 is that of tele-communications. Although no other frames are offered beside it for comparison, the teacher might use it as the lead into a general discussion of media effects. One could begin by asking what other means of communication exist and how they affect one's relationship to the information they carry. For example, compare what happens when a message is spoken under water and when the same message is spoken in air, i.e., consider the effects of water and air as communication media. If it is agreed that there is a meaningful difference between these two media, one might consider whether there is a meaningful difference between a news flash communicated by tribal drum and the same news communicated by radio. Between a hand-delivered letter and a telephone call. Between attending a sports or entertainment event and seeing it on television. Between seeing it on television and hearing it on radio. Between reading *War and Peace* and watching another "Showdown in the Gulf."[10]

Conclusion

> I mean the moment when it seems most plain
> is the moment when you must begin again.
>
> —*Gwendolyn MacEwen, 1984*

It is important to keep in mind that no one is immune to this blindness to media bias. Innis and McLuhan both recognized what has been called "the nemesis of creativity": "a blindness to the effects of one's most significant form of invention" (Innis, 1951, xii). A re-framing of a sort has been done by philosophers of education in pointing out the hidden curricula of schooling. In its role of discovering human potential, schooling can be seen as our most significant form of invention. William Hare points to a bias in the curriculum that dismisses one kind of value without proper consideration.

> The curriculum may suggest that only subjects which have utilitarian value of a definite kind are important. The meagre time devoted to art may itself undermine the art teacher's efforts to interest students in this area. Many otherwise well-educated people cannot grasp the value or point of a subject such as philosophy whose relevance to practical problems is not direct and immediate (Hare, 1993, 62-63).[11]

As educators in the arts, teaching media bias, we must never become complacent that our own work is bias free. In the process of writing this paper, my attention was drawn to a billboard advertisement I pass on my way to work. A fast-food retailer, promoting a new kind of spicy 'South-west' United States item on their menu, has used the figure of Kokopelli, the Anazasi symbol of fertility. The Anazasi were the ancient pueblo dwellers whose decendants are thought to be the Hopi. Kokopelli is the hunchbacked flute-playing trickster figure or Shaman whose image dates back 3,000 years to ancient petroglyphs.[12] The space of the advertisement is filled with a line of five Kokopellis in slightly different profile views each holding, in place of the flute, a baguette-type sandwich. The ad copy gives the name and slogan of the retailer followed by the words "Southwest Turkey and Bacon."

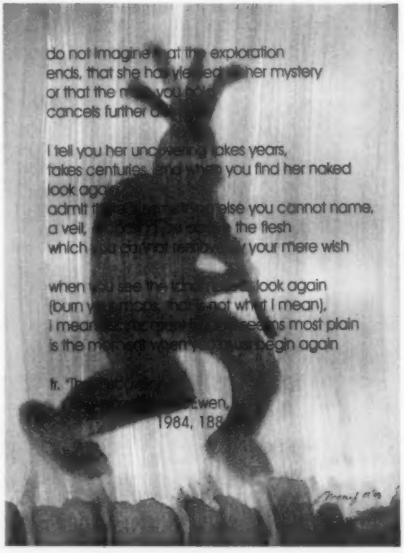

Figure 2

I photographed the ad and

brought it into my Secondary Language Arts class to demonstrate how the advertisement framed this native spiritual figure in a disrespectful way and how this bias, bigger than life, would go largely unnoticed. After some discussion of cultural appropriation, one student asked if I wasn't doing the same thing as the advertiser by using Kokopelli to make my point. Though another student came to my defense with the justification that I was using the figure for education not for profit, the challenge still bothers me; a reminder that bias is always as close as one's favourite medium of expression.

Notes

[1] Attempts to transmit facial expression on-line are manifest in simple graphic representations such as this sideways happy face : -) .

[2] McLuhan's use of textual play as a part of his theorising dates back to the early 1960s, years before the phrase "postmodern turn" became fashionable. For Derrida's reference to his own process of "double gesture" see *Positions*, Alan Bass, ed., 1981, 7. As for the term 'postmodern,' *The Fontana Dictionary of Modern Thought* (1977) refers to Jean-François Lyotard's *The Postmodern Condition: A Report on Knowledge* (1979) as a first instance of the term's use.

[3] McLuhan considered his own book, *The Gutenberg Galaxy* (1962), "a footnote to the observations of Innis on the subject of the psychic and social consequences, first of writing and then of printing" (Innis, 1951, ix).

[4] The terms 'tenor' and 'vehicle' as applied to the parts of metaphor were coined by I. A. Richards.

[5] For a full account of defamiliarisation, see Stacy, 1977.

[6] This was the decade when Yoko Ono began to influence John Lennon with her performance and conceptual art-work. See Alexandra Munroe's "Spirit of YES: The Art and Life of Yoko Ono" (2000). See also the documents of the avant-garde art movement called Fluxus.

[7] At the time Ulmer was writing, Derrida's highly experimental texts, *Glas*, *La carte postale* and *La vérité en peinture*, were just becoming available in English translation. In these, Derrida mimes artistic forms. Ulmer considers that this miming (or 'Writing,' to use Derrida's own term) constitutes Derrida's second major influence, in addition to the deconstruction of philosophical texts for which he is famous.

[8] Other images are used by the authors to demonstrate the figure/ground relationship but I have chosen the most familiar image of this type in the hope of successfully conveying it in verbal description.

[9] Ulmer uses the term (and as he cites no one, I assume he coins it) to refer to the significance of the knot in the pedagogical discourse of Jacques Lacan. "[H]e manipulates his class by means of the example (having an effect of puppet strings), with the cutting of the knot so that all the loops fall free having the status of a magician's stage trick, like pulling knotted scarves out of his mouth (Ulmer, 218)."

[10] The figure of news frames is my invention, crafted some time before I ran across Scheufele's "Framing as a Theory of Media Effects" (1999). The article is an excellent overview of the types of framing research in journalism and communications. Scheufele integrates them into a process model of framing, identifying four processes that should be addressed in future research: frame building, frame setting, individual-level processes of framing, and a feedback loop from audiences to journalists. It would seem that my figure of news frames represents one individual-level framing process. If teachers were to have their students mime it by creating their own figures of frames in other mass-media genres, a number of examples would soon be available to this area of research.

[11] Mary Midgley (2001, 144-145) analyses the popular senses of the term 'science' showing how two different and apparently contradictory definitions help to give the term its authoritativeness. Sanford Berman, who began his controversial career as a librarian by noticing that Western bias infused the Library of Congress subject heading scheme, points to a bias against fiction in the LC subject tracings. 'Micawber' and 'Mickey Mouse' are as much the foundations of fiction as 'igneous' and 'sedimentary' are foundational types in geology (examples mine). Sanford (1988) suggests this bias might be called 'fictionism.'

[12] For more on the Anasazi and Kokopelli, see: <http://raysweb.net/canyonlands/pages/anasazi>, <www.jowsey.com/kokopelli/kokopelli>, and <www.acaciart.com/stories/archive10>.

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— Continued from Page 12 —

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Scholarship, Study, and Lifestyles: Fifty Modern Thinkers on Education

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Fifty Modern Thinkers on Education: From Piaget to the Present
Edited by Joy A. Palmer; advisory editors Liora Bresler & David Cooper. London, UK: Routledge, 2001. 290 pages.

I

What is known in academic circles as the Routledge Key Guides is a series of some twenty-two "handbooks" whose stated purposes are to "define and discuss the central concepts, thinkers and debates in a broad range of academic disciplines"and to offer the "ultimate reference resources for students, teachers, researchers and the interested lay person" (Publisher's note). Roughly half the resource works in the series are titled "Fifty something..."[1] and two of these are concerned specifically with the domain of education: *Fifty Major Thinkers on Education: From Confucius to Dewey* and a companion volume, *Fifty Modern Thinkers on Education: from Piaget to the Present* which continues from where the former leaves off. Both are published under the same editorial team.

The various constituencies the editors claim to target in one swoop are by no means the same, and the risk of failing to address all groups satisfactorily is not insignificant. To be of interest to researchers, for example, the guides at the very least should be related in some useful

way to the construction of knowledge. This is not something which centrally engages either teacher or student, on the other hand, or certainly not in the sense of "knowledge construction" familiar to the researcher; and presumably it doesn't engage the lay person at all, though admittedly all three may be curious about *how* knowledge is constructed. To this extent, collections that profile the life and work of major and modern thinkers, the factors that influence the formulation of their ideas and theories and the impact of these on the development of education and its practices could be timely indeed. That (of course) remains to be seen. Other factors are involved as well in addressing these different constituencies not the least of which is the limited attraction that print literacy is having for students who live in a postmodern world of competing literacies and multiple demands on their time. By trying to walk a fine line in addressing all constituencies together the guides may, in the end, satisfy none. As a way of testing some of these notions and offering some assessment of the project's merit or value, I shall focus on the second of the two works, *Fifty Modern Thinkers on Education: From Piaget to the Present,* where "modern" is understood to mean "20th Century." Thus, covered in this collection are those deemed to have made a significant mark on education within the last one hundred years

II

To first of all sketch what we are dealing with, this is a collection of fifty short essays or profiles arranged in chronological order according to dates of birth. The essays are untitled and each is identified only by the name of the featured thinker. A panel of more than fifty writers[2] was assembled for the project many of whom are prominent educational theorists or researchers in their own fields.[3] Contrary to what the subtitle of the collection might suggest, the first entry is not Jean Piaget but A.S. Neill (b.1883), the Scottish dominie and radical child-centred proponent and headmaster of Summerhill in England, and the last is American Linda Darling-Hammond (b.1951), described as "the most visible and important educational policy-maker in the United States" (p. 286). In between are essays that span a wide range of thinkers both within the field of education and outside it, an acknowledgment that developments in educational thought and practice are by no means restricted to theorists or researchers within the field. From the "outside"several philosophers and postmodern thinkers are included: Ludwig Wittgenstein, Martin Heidegger, Michael Oakeshott, Simone Weil, Israel Scheffler, Jean-Francois Lyotard, Michel Foucault, and Jurgen Habermas. From the "inside," broadly speaking, there are psy-

chologists of various theoretical persuasions (Lev Vygotsky, Susan Isaacs, Jean Piaget, Carl Rogers, B.F. Skinner, Benjamin Bloom, Jerome Bruner, Lee Cronbach, Seymour Sarason, Margaret Donaldson, Lawrence Kohlberg, Carl Bereiter, and Howard Gardner); philosophers of education (Harry Broudy, Maxine Greene, R.S. Peters, Paul Hirst, Jane Martin, Nel Noddings, and John White); curriculum theorists and researchers (Harold Rugg, Ralph Tyler, Joseph Schwab, John Goodlad, Phillip Jackson, and Elliot Eisner); cultural critics (Paulo Freire, Ivan Illich, Neil Postman, Michael Apple, and Henry Giroux); sociologists (Basil Bernstein and Pierre Bourdieu); historian Lawrence Cremin; and several others who either transcend disciplinary boundaries or are otherwise less easily categorized (Herbert Read, Clark Kerr, Torsten Husen, Donald Campbell, and Theodore Sizer). This is an impressive line-up on the whole, and not one that would be easily finalized given the abundance of prominent thinkers from which to choose; nor is the list without serious shortcomings as I discuss in section IV.

Without exception the essays follow more or less the same format, some more effectively than others to be sure. Each is prefaced by a quotation intended to flag a prominent theme from a thinker's works and set a tone for what is to follow: "As I began to trust students ... I changed from being a teacher and evaluator to being a facilitator of learning" (p.49) is the opening quotation for the essay on Carl Rogers; and "Critical thought is of the first importance in the conception and organization of educational activities" (p.142) for Israel Scheffler. Biographical items including place of birth, educational institutions attended and institutions where appointments were (are) held, and special honours or awards are then sketched, as are various influences on a subject's thinking and intellectual development eg, family, teachers, mentors, colleagues or other theorists. Next, the central ideas, themes, or major theories a thinker has advanced and the implication of these for practice are briefly explored: e.g., schooling, individual freedom and the innate wisdom of the child (Neill); education as initiation into conversations of humankind (Oakeshott); emancipatory education for the disadvantaged and oppressed of the world (Freire); epistemological inequality in analytic philosophy of education and the exclusion of women from the educational realm (Martin); the production, appropriation and accumulation of knowledge by those in power in capitalist societies (Apple); and so on. At the end of each essay are lists of selected "major writings" and "further readings" for those wishing to make "further and more detailed study" (p.xiv), as well as a small section called "See also" that offers a very limited cross-reference to other entries elsewhere in this or its companion volume.

Once the prefatory quotations and the various end-sections are taken into account, the space for text proper (ie, actual content) is barely four pages on average. This means that information is presented in rather condensed forms. Some of the information is unnecessary but some of it is useful in tempering a previously held view or belief or modifying one's understanding of another's position or situatedness. I was unaware (for example) that B.F. Skinner loved to read and write poetry and was a skilled musician and painter as well; that Maxine Greene grew up in a family that discouraged intellectual adventure; that Carl Rogers first studied for the ministry which influenced his subsequent decision to study education; and that John Goodlad began his career teaching in a one-room school in rural British Columbia, presumably the scene of his first professional brush with standards and testing.

III

Among the essays I found to be exemplary in terms of the clarity and succinctness of writing, coherence of organization, and overall comprehensiveness I would include the following: Peter Hobson's on A.S. Neill, Anthony O'Hear's on Michael Oakeshott, John White's on R.S. Peters, Martin Hughes's on Margaret Donaldson, Terence McLaughlin's on Paul Hirst, Eliot Eisner's on Philip Jackson, and Susan Laird's on Jane Martin. This is not to say that others in the collection are unworthy of mention. In fact, given the limitations of space and the expectations placed on contributors the essays on the whole are done well enough. There is certainly an effort to put a human face to thinkers and their ideas by using story-like biographical and other short accounts of personal experiences and challenges that theorists often confront and overcome. Given the "confessional" age in which we live and the current fascination with the disclosures of peoples' individual lives, this may be an appealing feature of the collection for many. A related feature that will be attractive in some quarters too is the general sociological perspective with which the construction of knowledge seems to be portrayed in the volume, with many of the essayists bringing out the influence an individual's personal and social experiences has on the formation of ideas and theories, as distinct from the influence of reason or critical rationality on such formation. The sociology of knowledge view can of course be debated, and it is not necessarily a position to which all contributors or all thinkers discussed might subscribe.

In any undertaking of this sort, however, quality is bound to be uneven. Perhaps a moment for quibbling may be granted. Some essays (e.g., Carol Fitz-Gibbon's on the American Donald Campbell) are over-

loaded with personal and other detail not demonstrated to be sufficiently relevant to the purposes at hand and that ought to have been nipped by the editorial process;[4] while others (e.g., Ivor Goodson's on Basil Bernstein) are regrettably shot through with quotations to the point of distraction (and disruption). There are surprising failures too to identify concepts central or critical to a particular theory or position, as in Leslie Smith's essay on Piaget which makes no mention of the notions of "assimilation" and "accommodation" and how they figure in Piaget's theory of cognitive development. Peter Kuchinke in his essay on Kohlberg seems unable to differentiate clearly between the force of conceptual and empirical claims concerning cognitive or moral development: eg, in recognizing that the idea of "[moving] through a series of stages each successively more sophisticated" (p.191) is just what "cognitive development" *means* and is not to be confused with, or treated in the same way as, empirical claims about how cognitive development *occurs*, e.g., "as a result of cognitive disequilibrium" or "through integration of experiences into existing structures and the creation of new and more elaborate ones" (p.190). Finally, while vagueness or opaqueness does not significantly rear its head in the collection there are places (e.g., in the essay by I. Johannesson and Thomas Popkewitz on Pierre Bourdieu) where it is problematic and where a further iteration might have helped.[5]

Of deeper concern however is the lack of interpretive and critical-analytical work in many of the essays, and this despite the editor's assurance that contributors have engaged in "critical reflection" and "have moved *beyond* the purely descriptive and ... provided a *discussion* of the nature of the intellectual or practical impact [of] the life, thinking and works of each figure [on] ... our understanding or practice of education" (p. xiv) (my emphases). Did the editors not consistently follow up this policy with individual essayists to ensure a better balance between factual description and critical or reasoned assessment? Or did they conclude that in some cases this was to ask too much given the scope or complexity of the thinkers involved? Whatever the reasons, the lack of critical assessment too often results in bland, safe accounts that ignore the nature and grounds of objections leveled against a theory, failing in many cases even to catch a whiff of such debates. From Husen's essay on B.F. Skinner, for instance, no sense is conveyed of the intense controversy, or the reasons behind it, triggered by Skinner's positivist theory of behaviourism or where to find such reactions and discussions in the literature. And again in Kuchinke's essay, there is silence with respect to any of the concerns and objections leveled against Kohlberg's theory of cognitive moral development — the moral judgment-action gap, the theory's cross-cultural claims, the adequacy of stage 6 (and Kohlberg's

subsequent retrenchment to stage 4 for school purposes) or the feminist critiques of the theory's alleged male cognitive bias — nor (again) any direct leads as to where in the literature such debates are carried out. This is not in keeping with the stated purpose of the volume. The unsuspecting reader can easily be misled to conclude that certain theories of human learning or development are widely received and practiced, and thus to abandon prematurely the pursuit for further understanding or enlightenment.

IV

An obvious question for anyone who peruses this or its companion volume is how were the thinkers in question chosen? Any such lists are necessarily incomplete and exclusionary, and final decisions by editors are bound to generate a measure of surprise or disagreement. Hence the need for sound criteria. It is certainly clear from the list of modern thinkers that all fifty are drawn from the Western cultural tradition; that none is a person of colour, and all but six are male. To this extent the volume's title is misleading.[6] While the editors had a sense of "inclusion" or "equity" in mind as far as the coverage of disciplines or fields is concerned ("we ... aimed to provide coverage of a range of fields within the vast and complex arena of teaching and learning - philosophy, psychology, thinking on the early years, on testing, evaluation and so on" [p .xv]) — these seem nowhere to be found as far as gender or race is concerned. Historical explanations involving the rise in social-economic advantages of certain groups and the oppression of others over the last one hundred years may well be cited for the imbalances in the list of fifty, but the lack of greater inclusiveness on grounds of race or gender is unacceptable nonetheless; and this could hardly be for want of suitable candidates. bell hooks and philosopher Lawrence Blum (as persons of colour) spring quickly to mind, as do other women educators such as Jean Chall, noted for her research in reading, a field not represented by any of the thinkers selected. All readily meet the dominant selection criteria the editors used (ie, people who have made "very substantial contributions to educational thinking in some form or another" (p. xv) or "'influential lives' relating to critical thinking, action and, in more recent times, research, which [have] influenced policy and practice in the field of education" (p. xiv).

As often the case, problems can rest more with the application of criteria than with the actual criteria themselves (vagueness or other concerns notwithstanding). It is not only the *exclusion* of certain thinkers over which eyebrows may be raised, but the *inclusion* of some as well. I cannot argue the point here, but the case for including Wittgenstein as

one whose work is deemed to have substantially influenced policy and practice in the field of *education* seems to me to be thin indeed; and while Nicholas Burbules and Michael Peters in one of the longer essays in the collection try hard to make the case for Wittgenstein their efforts in the end fail.[7] A more defensible substitute might have been D.W. Hamlyn or R.M. Hare, both of whom from among their prodigious philosophical works *directly* addressed a number of significant educational issues such as origins and the growth of human understanding in the case of Hamlyn, indoctrination and theory of morality and moral education in the case of Hare. There may be problems too with the selection of the lesser known thinkers for the collection but this is more difficult to judge. That said, the inclusion of the remaining philosophers on the list (e.g., Lyotard, Habermas,[8] and others) as well as many of the thinkers from the other disciplines is certainly warranted.

V

As with any resource guide, *Fifty Modern Thinkers on Education: From Piaget to the Present* is not something to be read cover to cover, nor is it likely to engage anyone uninitiated into the realm of education or with no particular interest in the field. But is there a useful niche for this volume to fill nonetheless? The short answer is "yes." My (limited) research for this essay failed to uncover any other work quite like the present one. None came close to profiling the range of thinkers in terms of nationalities and disciplines or fields involved, and most other such collections are written by one or very few people and as a result lack the breadth of scholarly insight[9] standing behind this collection. Beyond an initial curiosity as to who is included in the fifty thinkers, I think it is likely that researchers and teachers — two of the target groups identified by the editors as mentioned earlier — would find it useful to have such a work as this close at hand if only to unearth some primary or secondary sources previously unknown to them, or for a quick refresher on particular thinkers not read in some time, or to seek an elusive biographical fact perhaps.

While it is always risky to impute motives, of the various constituencies targeted it is the students, and I suppose students of education and related fields in particular, whom the editors had primarily in mind; and they try hard to make the collection as accessible and user-friendly as possible to this group. The overall format the editors adopted for the volume and the manner in which it is laid out is perhaps the most obvious yet in critical respects least satisfactory way in which to accomplish this purpose. I say this because it roughly assimilates the way computerized text on-screen is presented, and it may unfortunately pander as a result

to the expectations contemporary students have of how information and knowledge should be organized and presented to them, ie, in the form of information bytes with "bullets," tables, and so on. Such conditioning of expectations arguably exemplifies the claims of critical theorists concerning the effects of electronic and other media on the consciousness of those living in advanced capitalist societies. I hasten to add that *Fifty Modern Thinkers on Education* does not succumb to the use of computer graphics on its pages, but the condensed and rather cursory pieces the essayists have been asked to craft and the very linear and rapid-fire succession in which they are presented without thematic (or other) forms of grouping or editorial commentary, bears more than a fleeting resemblance to the electronic website.

This is unfortunate in light of widely expressed worries about the state of student literacy, especially at the higher (post-secondary) levels. Many who teach at this level will be familiar enough with the indices of literacy they are witnessing in students — a growing lack of interest in reading and the printed word, a diminishing resolve to grapple with difficult texts and complex ideas, and a disturbing indifference to the historical. The likely impact of the present collection given its organization and manner of presentation (bearing in mind as well the trend to make other books students use look more and more like web-sites), is to divert students from reading original works and depriving them of opportunities for genuine reading experiences. This is not a recipe for the improvement of student literacy; and it will certainly reinforce the attitudes of many students that, once having perused a piece of substitute reading, they have all they need to know about a topic or issue (or, worse still, they know all there is to know about it). Any state of mind not open to possibilities of further learning or to modifying views already formed on the basis of limited reading done, is not a state we can call "educated". I am certain the editors would deny any such intent for their collection; and with them I would agree. If the collection has the effect of igniting student interest in learning about educational ideas, theories or policies so much the better of course. My worry nonetheless is with the *unintended* consequences for student literacy, and the risks of reinforcing the habits and attitudes against reading that the manner in which such a work is organized and presented might trigger.

The sweep in time these two volumes of thinkers on education actually take is of course enormous. It is worth noting that while the first volume could "cover" major thinkers on education for nearly 2500 years from Confucius to Dewey, the second volume could "cover" thinkers on education for only 100 years, and that in the Western world alone from (roughly) Piaget forward. If evidence for the democratization of ideas in

Western culture over the last century is needed, this should surely be sufficient. Of greater significance for the concerns just raised however, is the link this explosion of thinkers in the twentieth century might have to the hurried and often superficial treatment their ideas and theories now seem to be receiving as a matter of course.

Notes

[1] For example: *Fifty Major Economists, Fifty Major Philosophers, Fifty Contemporary Choreographers, Fifty Key Thinkers on the Environment, Fifty Key Thinkers in International Relations,* etc.

[2] Several of the essays are co-authored.

[3] Nicholas Burbules, Eamonn Callan, Walter Feinberg, Andrew Hargreaves, Terence McLaughlin, Anthony O'Hear, Michael Peters, Thomas Popkewitz, Harvey Siegel, and Richard Smith. It is also worth noting that several of the contributors — Michael Apple, Eliot Eisner, Howard Gardner, Torsten Husen and John White — are themselves subjects of essays, being among the "fifty modern thinkers" selected for this collection.

[4] We are informed for instance that Campbell graduated from high school at age 18 and that he lived at home during his freshman and sophomore years at San Bernardino Valley Junior College; and excerpts are quoted from Campbell's obituary (*The New York Times*, May 12, 1996) including his wife's statement of the cause of death as well as this final sentence: "In addition to his wife, a retired professor of anthropology at Lehigh, he is survived by two sons from a previous marriage ... a sister, ... and two grandchildren" (p.107). Another essay, Bruce Uhrmacher's on Elliot Eisner, not only cites the length of Eisner's *curriculum vitae* at 92 pages but adds that Eisner has written "285 articles and fifteen books, averaging about seven published articles per year since 1970" (p.247).

[5] Johannesson and Popkewitz write: "Bourdieu explains *habitus* as the structured and structuring mental structure through which individuals acquire their views and behaviour as a second nature. Yet habitus is not a static thing but a structuring that is continually embodied in a process of transformation, the effect of the social trajectories leading to changes in the situations of individuals, changes in relation to what counts as capital in a given social field" (p.321).

[6] It fails to delimit the scope of the volume's content more accurately, unless the presence of Piaget's name in the subtitle is somehow intended to do the job. A more honest (but equally uninspiring) title might have been "Fifty Modern Thinkers on Education in the Western World."

[7] Three ways to make a case for inclusion are explored: Wittgenstein's university teaching, his experiences as a primary and secondary teacher in Austria, and his style of writing and composing his philosophical ideas. His experiences as a primary teacher were disastrous on the whole, and while Burbules and Peters claim that his secondary teaching experiences "accounted for a profound change in Wittgenstein's philosophizing in the 1920's," that seems to put the influence we are looking for in reverse order. One way in which

Wittgenstein's "style of writing and composing philosophical ideas"did have an impact on educational thought for a time is the analysis of educational language and concepts, an activity that engaged many philosophers of education in the English-speaking world from the 1960s to the early 80s and one in which they found the later Wittgenstein's theory of meaning in his *Philosophical Investigations* to be quite useful. Curiously, Burbules and Peters make no mention of this in their essay. (I do not wish to imply that such influence would be sufficient to meet the selection criteria in Wittgenstein's case.)

[8] Lyotard, not least for his analysis of technology and its impact on the quality of teaching and learning, and of the "commercialization"of knowledge and its changing status in a post-industrial world; and Habermas for the impact of his views on illegitimate power and structured inequality inherent in capitalism, on curriculum theory and planning, as well as for the inspiration his work has given those educational theorists in the field of critical pedagogy (see Keith Morrison's essay, particularly pp 215-21)

[9] For example Kridel, C., Bullough, R.V. & Shaker, P. eds. (1996) *Teachers and Mentors: Profiles of Distinguished Twentieth Century Professors of Education,"* New York: Garland Publishing, features twenty-two profiles, all are American and none are outside the field of education. The work by Ohles, F., Ohles, Shirley & Ramsay J.G (1997), *Biographical Dictionary of Modern American Educators*, Westport, CT: Greenwood Press, is authored wholly by those named and devotes no more than a page to each educator.

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